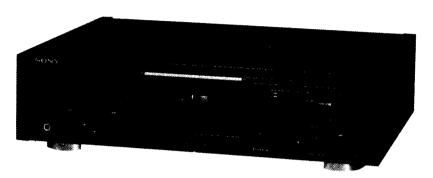
TG-K333ESR/K730ES

SERVICE MANUAL



US Model Canadian Model AEP Model UK Model TC-K730ES E Model TC-K333ESR

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol [II] are trademarks of Dolby Laboratories Licensing Corporation.

This photo is TC-K333ESR

SPECIFICATIONS

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	TCM-110D3

Recording system 4-track 2-channel stereo

Bias frequency

210 kHz

Heads

Erase head × 1 (S & F head)

Record head × 1 (LA head)

Playback head × 1 (LA head)

Motors

Capstan motor × 1 (direct drive linear torque

BSL motor)

Reel motor × 1 (DC motor)

Wow and flutter

±0.04% W.peak (IEC)

0.025% WRMS

Fast-forward and rewind time

Approx. 90 sec (with C-60 cassette)

Frequency response

Dolby NR OFF

TYPE IV cassette (Sony METAL-ES)

 $20 - 21,000 \text{ Hz} \pm 3 \text{ dB (DIN)}$

20 - 16,000 Hz ±3 dB (0 VU recording level)

15 - 22,000 Hz

TYPE II cassette (Sony UX-S)

20 - 19,000 Hz ±3 dB (DIN)

15 - 20,000 Hz

TYPE I cassette (Sony HF-S)

20 - 17,000 Hz ±3 dB (DIN)

15 - 19,000 Hz

Signal-to-noise ratio (at peak level)

Cassette Dolby NR system	TYPE I (Sony HF-S)	TYPE II (Sony UX-S)	TYPE IV (Sony METAL-ES)
C-TYPE ON	69 dB	72 dB	73 dB
B-TYPE ON	63 dB	66 dB	67 dB
OFF	56 dB	59 dB	60 dB

Total harmonic distortion

0.8% (with Sony METAL-ES cassette)

Inputs Line inputs (phono jacks)

Sensitivity 77.5 mV

Input impedance 50 k ohms

Outputs Line outputs (phono jacks)

Rated output level 0.44 V (-5 dB) at

load impedance 47 k ohms

Minimum load impedance 10 k ohms Headphones output (stereo phone jack Output level continuously variable

from 0 - 3 mW (at load impedance 32 ohms)

General

Power requirements

US, Canadian model: 120V AC, 60Hz

UK model: 240V AC, 50Hz

(220V AC adjustable by authorized Sony

personnel)

AEP model: 220V AC, 50/60 Hz

(240V AC adjustable by authorized Sony

personnel)

E model: 120, 220 or 240V AC

adjustable, 50/60Hz

Power consumption

30 watts

Dimensions Approx. $470 \times 125 \times 350 \text{ mm (w/h/d)}$

(185/8 × 5 × 133/4 inches)

Weight Ap Supplied accessories

Approx. 9.5 kg (22 lb) ies

Connecting cord (2) Screws (8)

- continued on ext page -



STEREO CASSETTE DECK

Peak program meters

Display range -40 to +8 dB

Frequency response

20 - 20,000 Hz ±1.5 dB

Attack time 1 ms

leady time

Recovery time 750 ms (from 0 to -20 dB)

Number of display segments

16 each for left and right channel

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

TABLE OF CONTENTS

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK

ON THE SCHEMATIC DIAGRAMS AND IN THE
PARTS LIST ARE CRITICAL TO SAFE OPERATION.
REPLACE THESE COMPONENTS WITH SONY PARTS
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

OPERATING VOLTAGE

Before connecting the unit to the power source, check that the operating voltage of your unit is the same as the local power line voltage.

The USA and Canada model operates on 120 V AC.
The European model operates on 220 V AC (or 240 V AC adjustable by authorized Sony personnel).

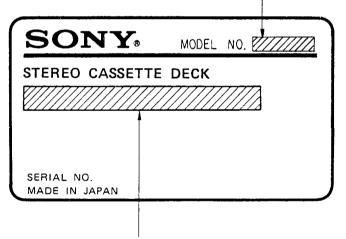
The United Kingdom model operates on 240 V AC (or 220 V AC adjustable by authorized Sony personnel).

The model for other countries operates on 120, 220 or 240 V AC. The voltage selector is located on the rear panel. If the selector must be reset, **disconnect the AC power cord** and set the selector to the appropriate voltage.

MODEL IDENTIFICATION

- Specification Label -

TC-K333ESR, TC-K730ES



AEP Model: AC: 220 V~50/60 Hz UK Model: AC: 240 V~50/60 Hz

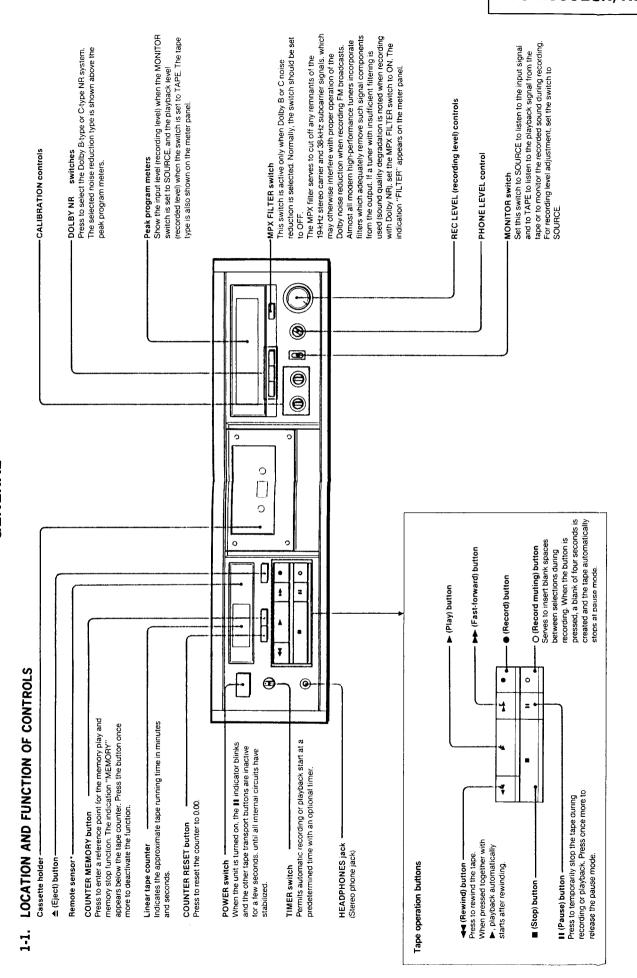
E Model: AC: 120/220/240 V~50/60 Hz 30 W

US Model: AC: 120 V 60 Hz 30 W Canadian Model: AC: 120 V 60 Hz 30 W

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE A SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL



SECTION 2 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denaturedalcohol-moistened swab:

record/playback head

pinch roller

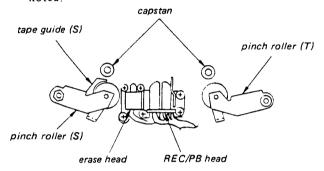
erase head

rubber belts

capstan

idlers

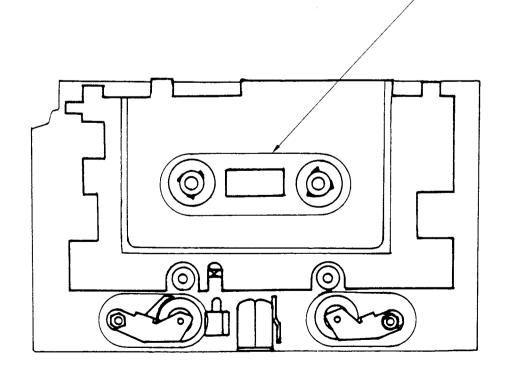
- 2. Demagnetize the record/playback and erase head with a head demagnetizer.
- 3. Do not use a magnetized screwdriver for the adjustments.
- 4. After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.



FF, REW Torque Check

- 1. Insert the torque meter CQ201B.
- Check FF torque when changing the mode STOP
 → FF
- 3. Check REW torque when changing the mode $STOP \rightarrow REW$.

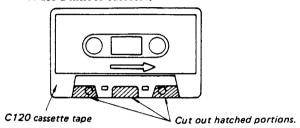
Torque	Torque meter	Reading
FF, REW	CQ201B	60 to 130 g·cm (0.84 to 1.82 oz·inch)



Head Height Adjustment

Insert a mirror cassette or adjustment cassette and adjust screws (A) — (G) so that the tape enters the tape guide of the record/playback head smoothly when pushing the head base out by hand.

 Make an adjustment cassette as shown below or use a mirror cassette.



Insert the mirror cassette (or adjustment cassette) into the set. In FWD mode, the tape should not curl at the portions shown by arrows (tape guides) in Fig. a.
 If it does, adjust the height of tape guide of supply pinch roller.

Adjustment locations:

adjustment screw of tape curl in Fig. b (Be careful not to turn the screw more than 1/2 turn.)

3. Back tension: 0

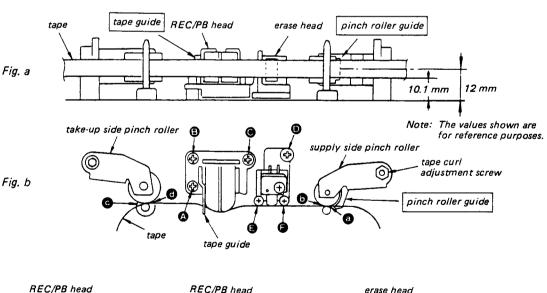
Make sure that there is no tape twist at portions

- 1. When the tape twists upwards:

 Turn adjustment screws 3, 6 of the record/playback head and recline the head as shown in Fig. c.
- 2. When the tape twists downwards:
 Turn adjustment screws **B**, **C** and recline the head as shown in Fig. d.
- Measure the height of erase head.
 If it is out of the range indicated in Fig. e, follow the procedures below.
 - 1. When the height of erase head is out of the range:

Adjust the height by screws **(D)**, **(3)** of the erase head.

2. After adjusting the height of the erase head, make sure that the head is not inclined. If necessary, loosen or tighten adjustment screw .



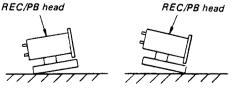


Fig. c

Fig. d

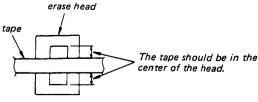
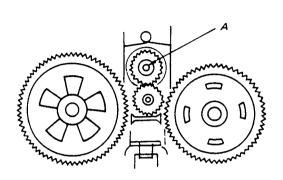


Fig. e

Forward Torque/Back Tension Torque Adjustment

1. Insert the taken-up tape, and set the Forward mode. Adjust RV701 so that the A bigins to rotate.



2. Insert the torque meter CQ102C, make sure that the forward torque and the back tension torque meet the specifications.

Specifications

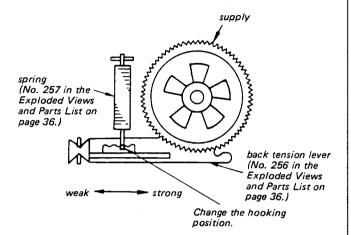
Forward torque: 30 to 60 g-cm

(0.42 to 0.84 oz-inch)

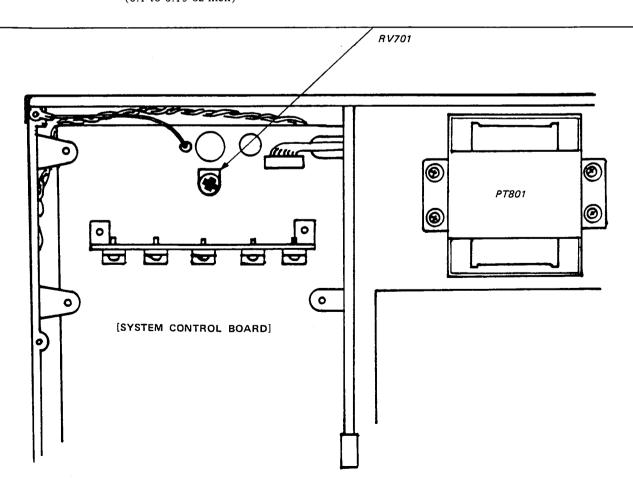
Forward back tension torque:

7 to 10.5 g·cm (0.1 to 0.15 oz·inch)

3. When the forward back tension torque doesn't meet the specifications, adjust by changing the hooking position of the spring as shown below.



Adjustment Location: system control board



SECTION 3 ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.

The adjustments should be performed for both L-CH and R-CH.

• Simultaneous REC/PB Mode:

Input the signals to LINE IN terminal and set to REC mode. Set the monitor switch to TAPE, and monitor the recorded signal from LINE OUT terminal.

• Switch Position:

DOLBY NR . . . OFF
NPX FILTER . . . OFF
TIMER . . . OFF

• Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

Input Terminal	LINE IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

Standard Output Level

Output Terminal	LINE OUT
load impedance	47 kΩ
output level	0.44 V (-5 dB)

Tape Speed/WOW Check Procedure: test tape WS-48S (3 kHz, 0 dB) frequency counter & WOW meter 47 k\Omega

1. Measure the output frequency and the WOW value while playing back the tape top of the test tape.

LINE OUT

L or R-CH

2. Turn over the test tape, measure the output frequency and the WOW value, and check the differ ence against the values of the step 1.

Specification:

TAPE SPEED deviation:

within 2,990 to

3.010 Hz

TAPE SPEED fluctuating width: within 2,990 to

3,010 Hz

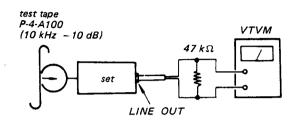
WOW (WRMS):

0.037% below

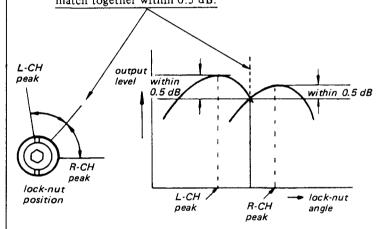
Provisional Playback Head Azimuth Adjustment

Procedure:

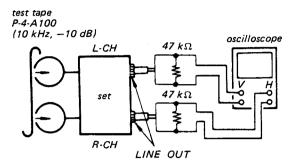
1. Mode: playback



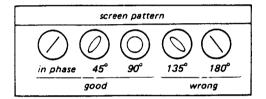
2. Turn the adjustment lock-nut for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



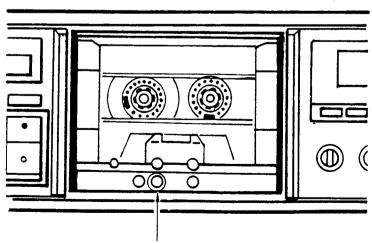
Phase check.Mode: playback



4. Make sure the phase difference is in between inphase to 90°.



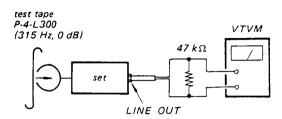
Adjustment Location:



Playback Level Adjustment

Procedure:

Mode: playback



Adjust RV101 (L-CH) and RV201 (R-CH) to obtain the specified LINE OUT level.

Specification:

LINE OUT level: 0.41 to 0.46 V

(-5.5 to -4.5 dB)

Level difference between channels:

less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: PB board

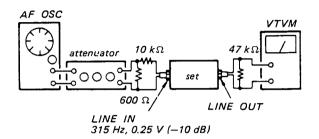
Meter Level Adjustment

Setting:

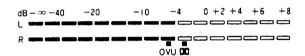
MONITOR switch: SOURCE

Procedure:

1. Stop mode.

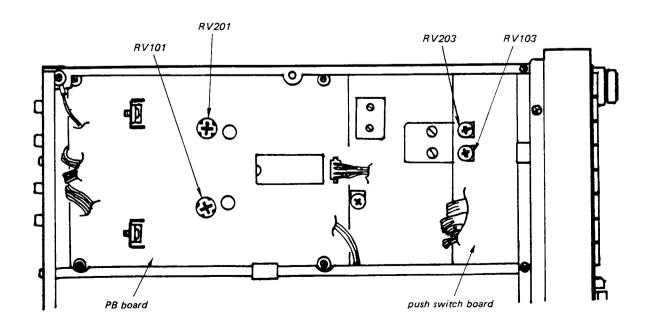


2. Adjust the recording level so that the LINE OUT level is 0.44 V (-5 dB). In this time adjust RV103 (L-CH) and RV203 (R-CH) so that the 0 VU (-4 dB) segments of the meter light-up.



3. Adjust the recording level so that the LINE OUT level is 1.9 V (8 dB). In this time, make sure that all the segments of the meter light-up.

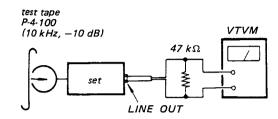
Adjustment Location: push switch board



PB DOLBY NR Check

Procedure:

1. Mode: playback



2. Make sure that the output levels are different in DOLBY NR OFF, B, and C.

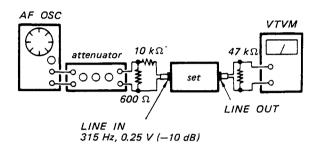
Specification:

OFF \leftrightarrow B level difference -0.5 to -2.5 dB B \leftrightarrow C level difference -0.5 to -2.5 dB

MPX FILTER Check

Procedure:

1. Mode: stop



- 2. Apply 315 Hz, 0.25 V ($-10 \, dB$) signal and adjust REC LEVEL control so that the LINE OUT level is 0.44 V ($-5 \, dB$).
- 3. Apply 19 kHz, 0.25 V (-10 dB) signal and measure the LINE OUT level.

Specification:

DOLBY NR: OFF, FILTER: ON/OFF 0.49 to 0.39 V (-4 to -6 dB) DOLBY NR: B, C, FILTER: ON 0.025 V (-30 dB) or less

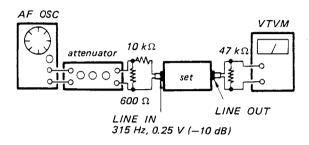
Provisional Record Head Azimuth Adjustment

Setting:

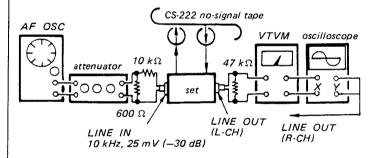
BIAS CAL control: center click

Turn RV506 (L-CH, R-CH) fully clockwise and counterclockwise 1/2 to 1 time. (See Record Bias Adjustment on page 13.)

Procedure:



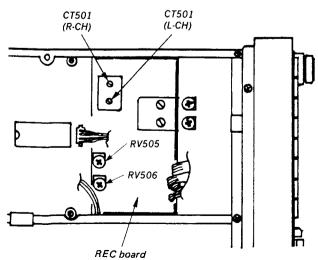
1. Apply 315 Hz, 0.25 V (-10 dB) signal and adjust REC LEVEL control so taht the LINE OUT level is 0.44 V (-5 dB).



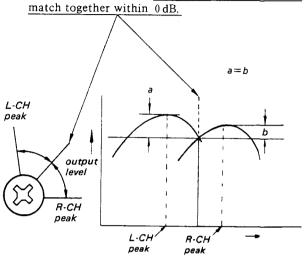
2. Apply 10 kHz, 25 mV (-30 dB) signal, set to the simultaneous REC/PB mode.

Adjustment Location: REC board

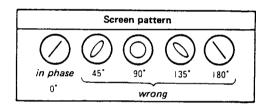
record bias adjustment trimmer



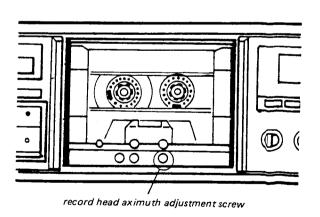
3. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels



4. Simultaneously, adjust the azimuth screw so that the phase difference between L-CH and R-CH is 0°.



Adjustment Location: head



Bias Osc Frequency Adjustment

Setting:

Metal Tape (TYPE IV)

LINE IN:

no signal

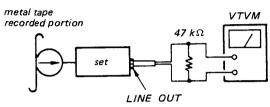
REC LEVEL knob: standard record position

(See page 7.)

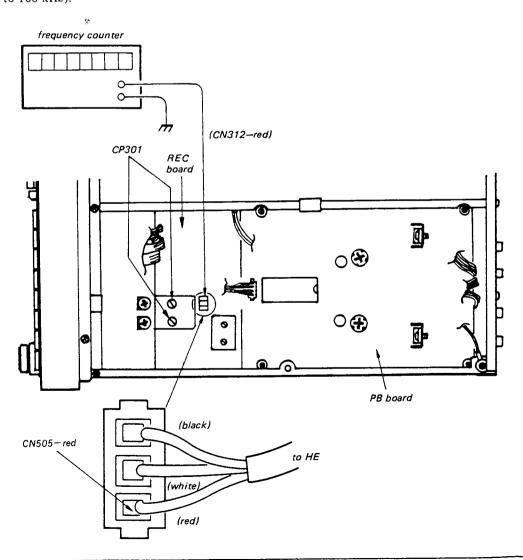
Bias Osc Frequency

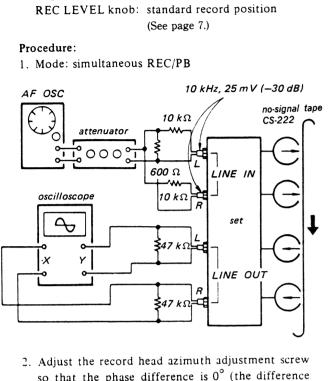
Procedure:

1. Mode: record

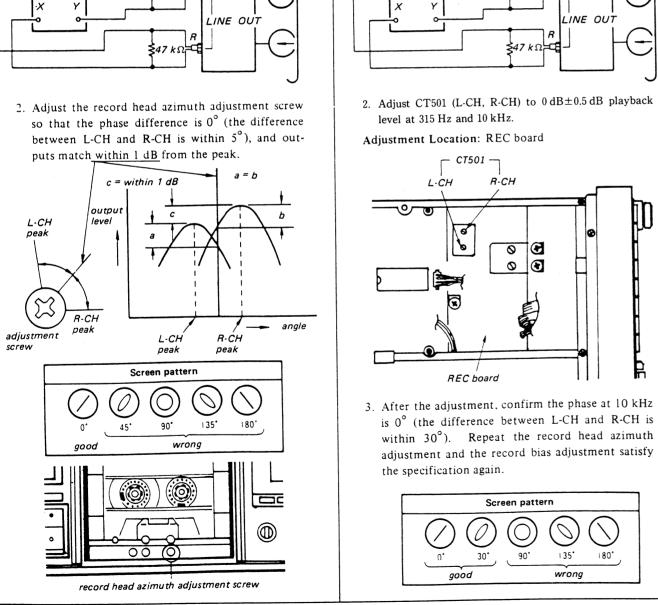


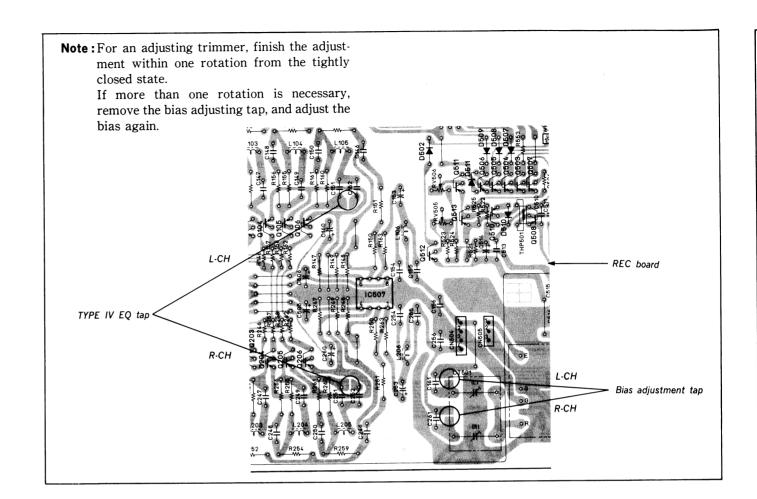
2. Connect the frequency counter lead, to the erase head connecting terminal. Adjust CP 501 so that the reading on the frequency counter is 105 kHz (within 104 to 106 kHz).

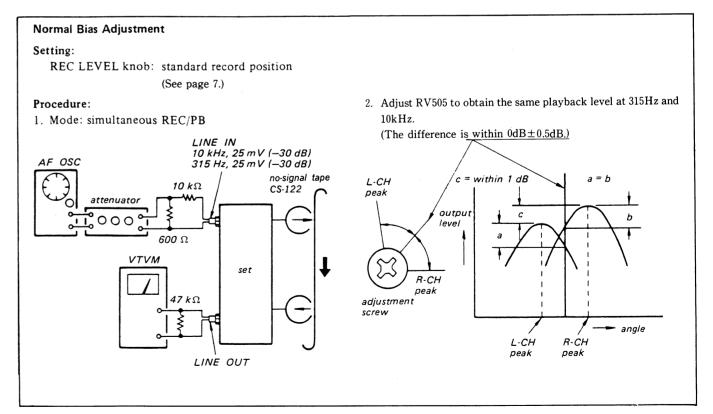




Record Head Azimuth Adjustment







-14-

METAL Setting: REC LEV Procedu

1. Mode

2. Adjus (The

adjustme

Record Bias Adjustment

1. Mode: simultaneous REC/PB

REC LEVEL knob: standard record position

(See page 7.)

10 kHz, 25 mV (-30 dB) 315 Hz, 25 mV (-30 dB)

LINE OUT

wrong

no-signal tape

Setting:

Procedure:

AF OSC

oscilloscope

METAL Bias Adjustment

Setting:

REC LEVEL Knob: Standard record position

(See page 7.)

Procedure:

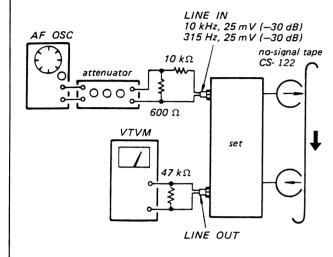
- REC board

Bias adjustment tap

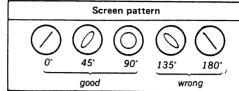
ck level at 315Hz and

-- angle

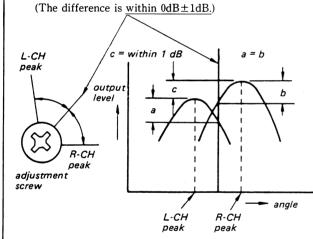
1. Mode: simultaneous REC/PB



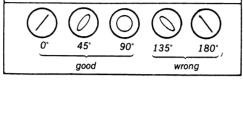
recording head vertical adjustment fully.

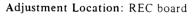


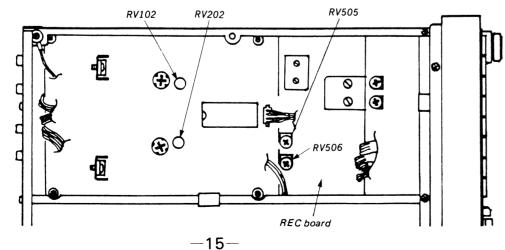
2. Adjust RV506 and TYPE IV EQ tap to obtain the same playback level at 315kHz and 10kHz.



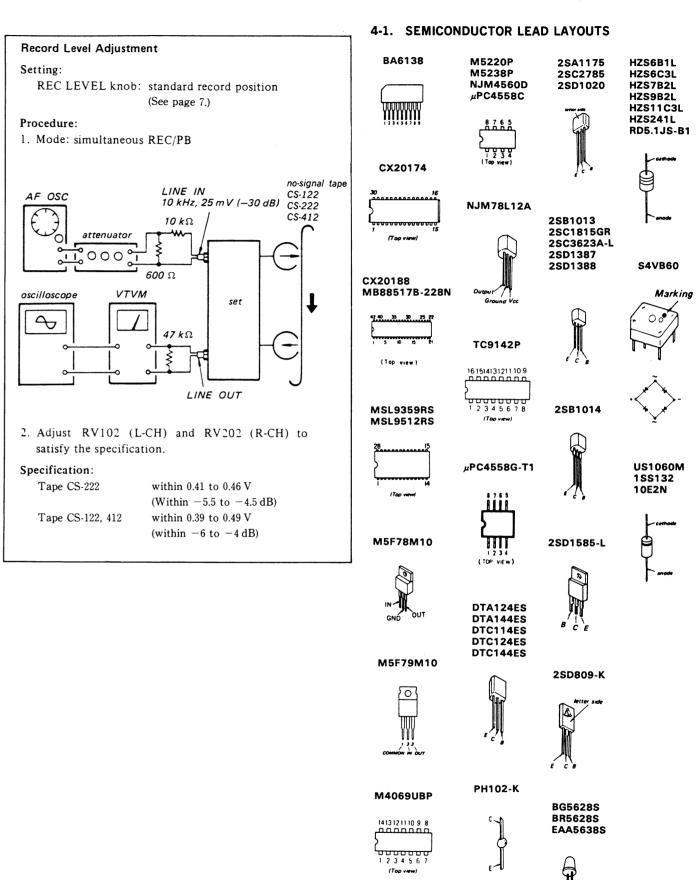
3. After adjustment, check the phase with 10kHz and make re-adjustment at 0° (L-CH, R-CH phase difference: Within0 ± 90°), and repeat the adjustment of bias and







SECTION 4 DIAGRAMS

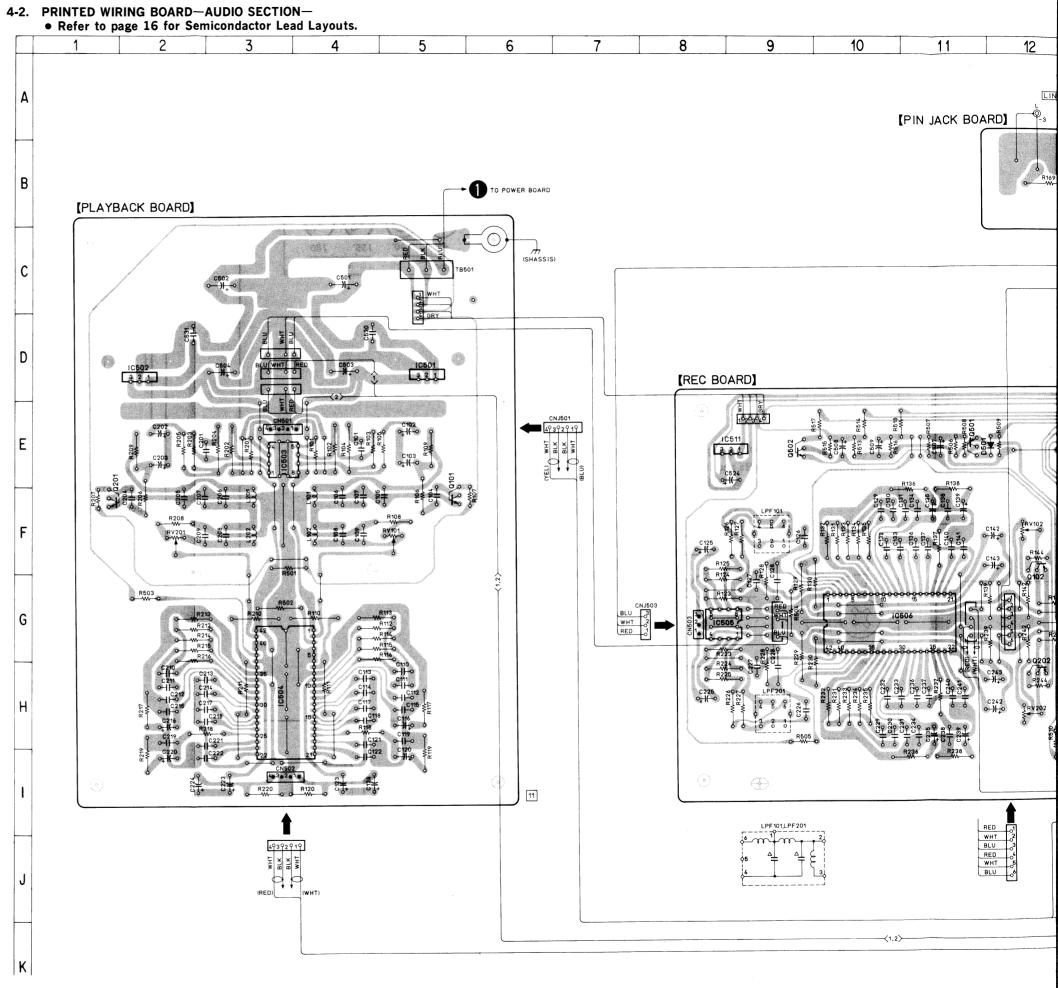


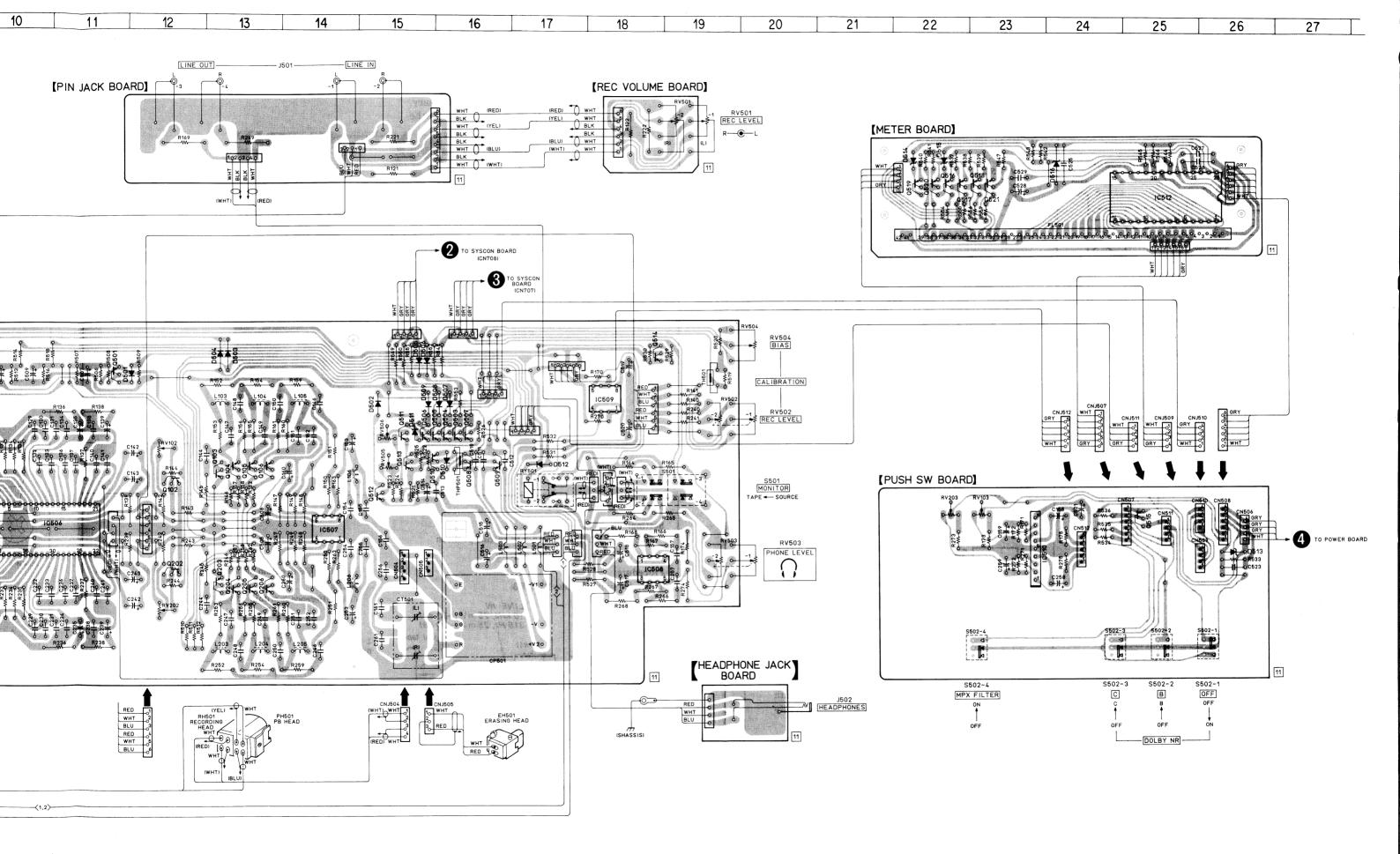
• Semicon	ductor Loca	ition	
Ref. No.	Location	Ref. No.	Location
IC501	D-5	Q509	F-16
IC502	D-2	Q510	F-15
IC503	E-3	Q511	F-15
IC504	H-3	Q512	G-15
IC505	G-8	Q513	F-15
IC506	G-10	Q514	E-18
IC507	G-14	Q515	G-25
IC508	H-18	Q516	C-22
IC509	F-18	Q517	C-22
IC510	H-23	Q518	C-23
IC511	E-8	Q519	C-22
IC512	C-25	Q520	C-22
		Q521	C-23
Q101	F-5	Q1001	1-5
Q102	G-12	Q1002	J-4
Q103	F-13		
Q104	F-13	D501	E-11
Q105	F-13	D502	F-15
0400	- 40	D503	E-13
Q106	F-13 F-1	D504	E-13
Q201		D505	E-15
Q202 Q203	H-12	DEGG	F 15
Q203	H-13 H-13	D506 D507	E-15 E-16
Q204	H-13	D507	E-15
0205	H-13	D509	F-15
Q206	H-13	D510	F-16
Q501	E-11	5510	1 10
Q502	E-9	D511	F-15
Q503	F-16	D512	F-17
		D513	H-26
Q504	F-16	D514	B-22
Q505	F-15	D515	B-22
Q506	F-15	D516	C-24
Q507	F-16		
Q508	F-16		

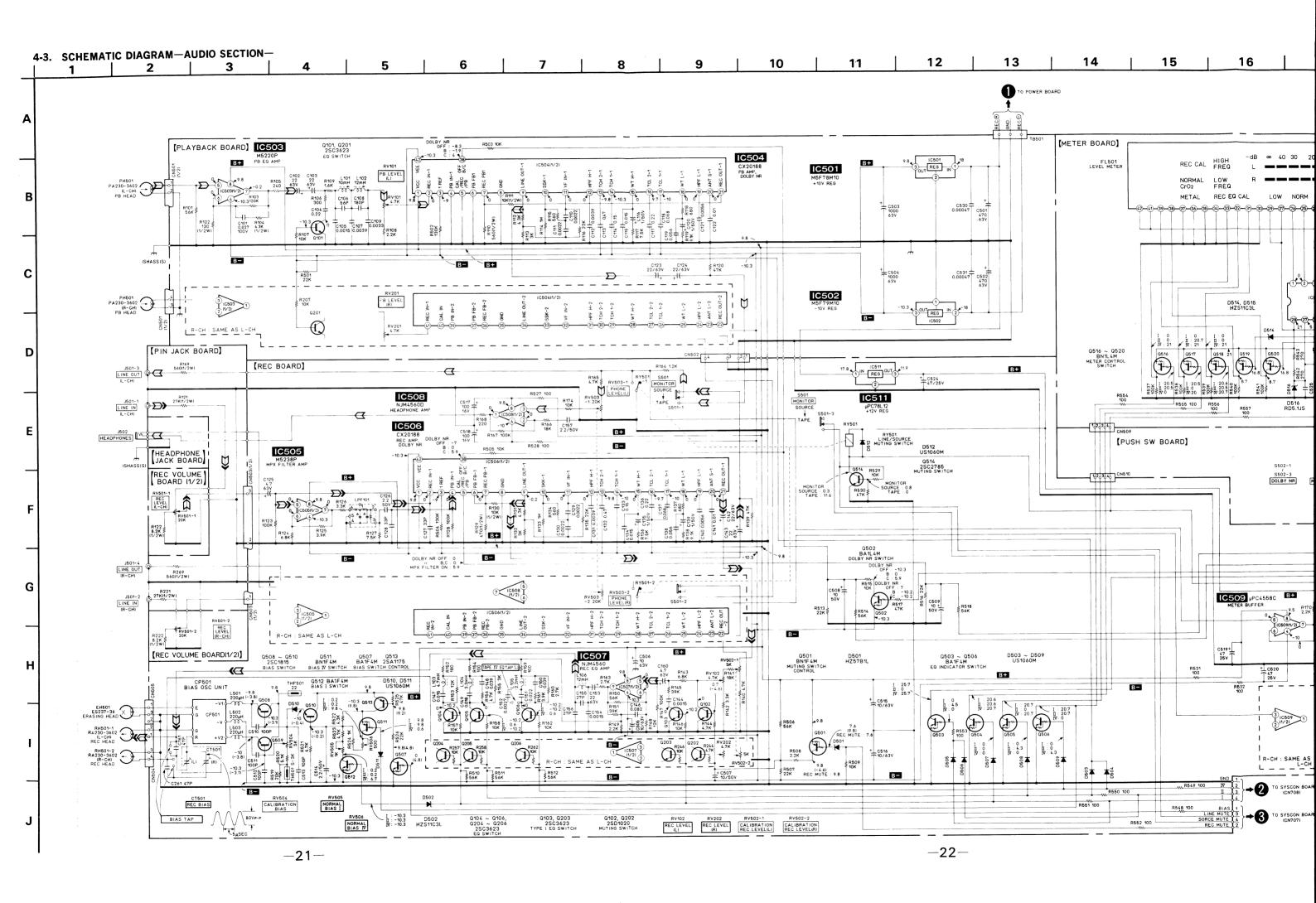
-: parts extracted from the component side.

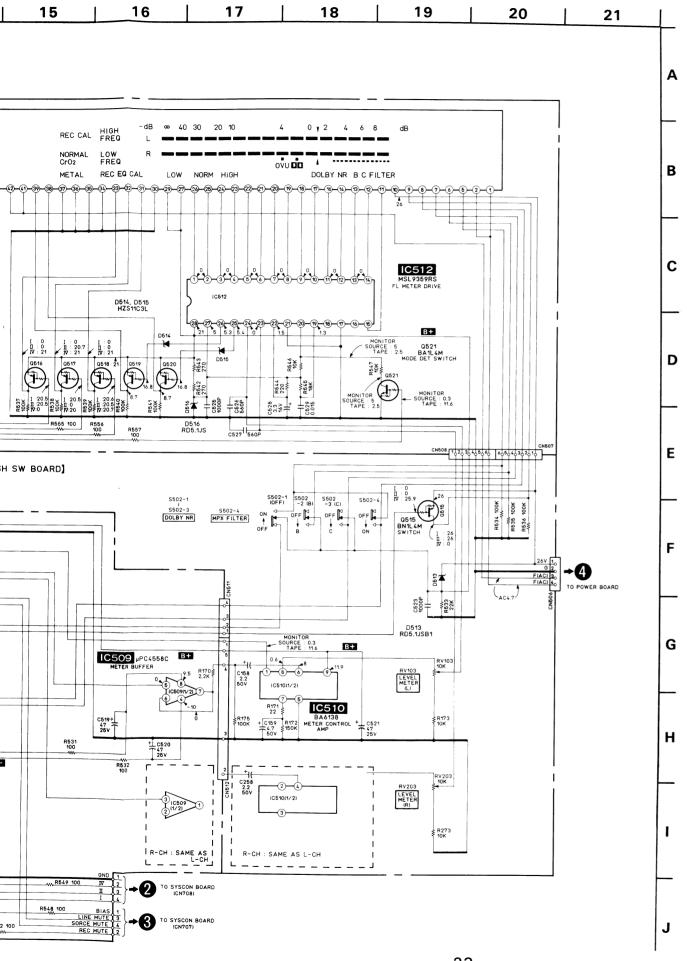
-: parts extracted from the conductor side.

: parts mounted on the conductor side.









Note:

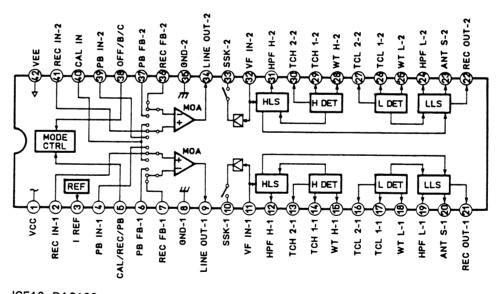
- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- B+ : B+ Line
- B- : B- Line
- adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.

no mark: STOP

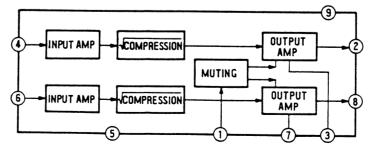
- (): REC
 - I: NORMAL
 - II: CrO2
 - III: METAL
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal produc-
- tion tolerances. Signal path.

 - **∑** : **PB**
 - ∑> : REC

IC504 CX20188



IC510 BA6138



4-4. PRINTED WIRING BOARD—SYSTEM CONTROL SECTION—

 Refer to p 	age 16 for Sen	niconductor L	ead Layouts.								
1	2	3	4	5	6	7	8	9	10	11	\perp

• Semiconductor Location

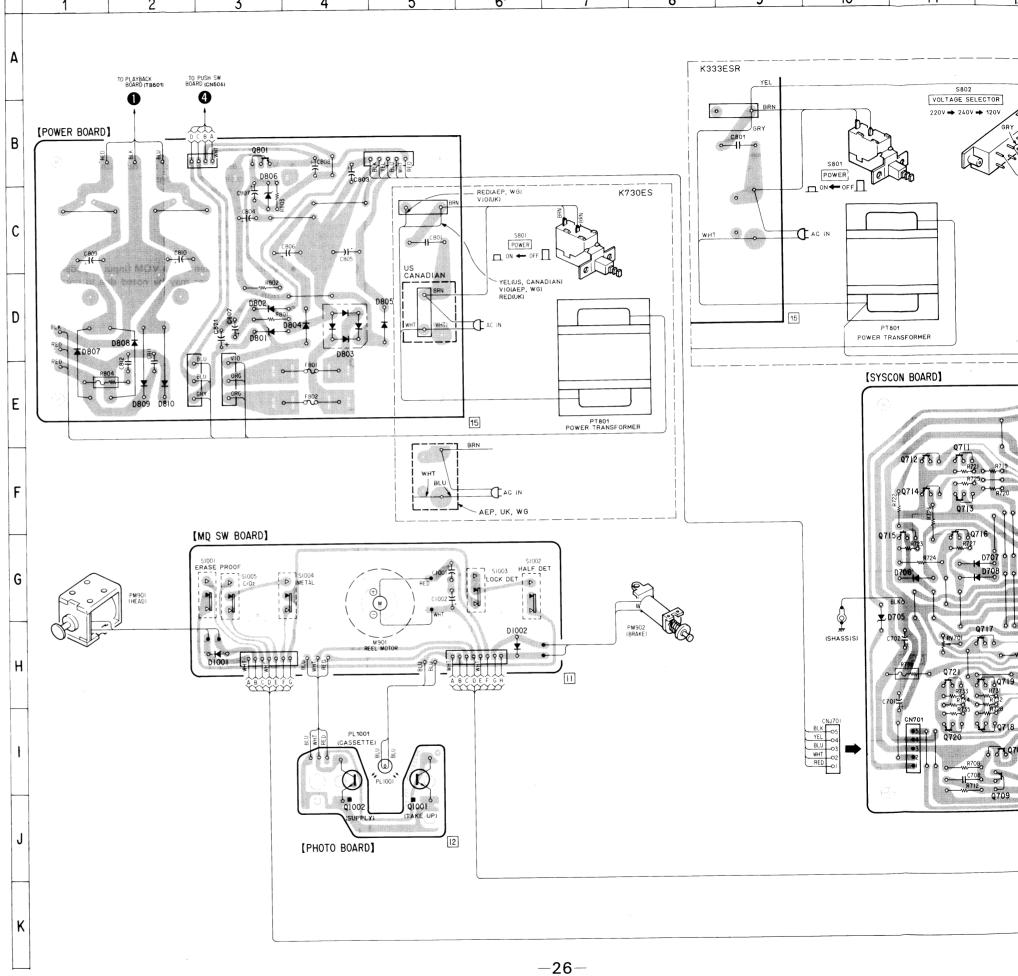
Ref. No.	Location	Ref. No.	Location
IC701	F-16	Q722	H-16
IC702	H-15	Q801	B-3
IC703	I-16		
IC704	I-17	D701	E-14
IC705	D-14	D702	G-13
IC706	F-23	D703	I-13
IC901	I-22	D704	G-14
IC902	J-23	D705	H-10
		D706	G-11
Q701	F-13	D707	G-12
Q702	G-13	D708	G-12
Q703	I-13	D709	C-20
Q704	G-13	D710	C-22
Q705	H-13	D711	B-22
Q706	F-13	D712	F-17
Q707	G-13	D713	E-23
Q708	I-12	D714	H-16
Q709	J-12	D801	D-3
Q710	G-13	D802	D-3
Q711	F-11	D803	D-4
Q712	F-11	D804	D-4
Q713	F-11	D805	D-5
Q714	F-11	D806	B-3
Q715	G-11	D807	D-1
Q716	G-11	D808	D-2
Q717	H-12	D809	E-2
Q718	I-12	D810	E-2
Q719	H-12	D1001	H-3
Q720	I-11	D1002	H-6
Q721	H-11		

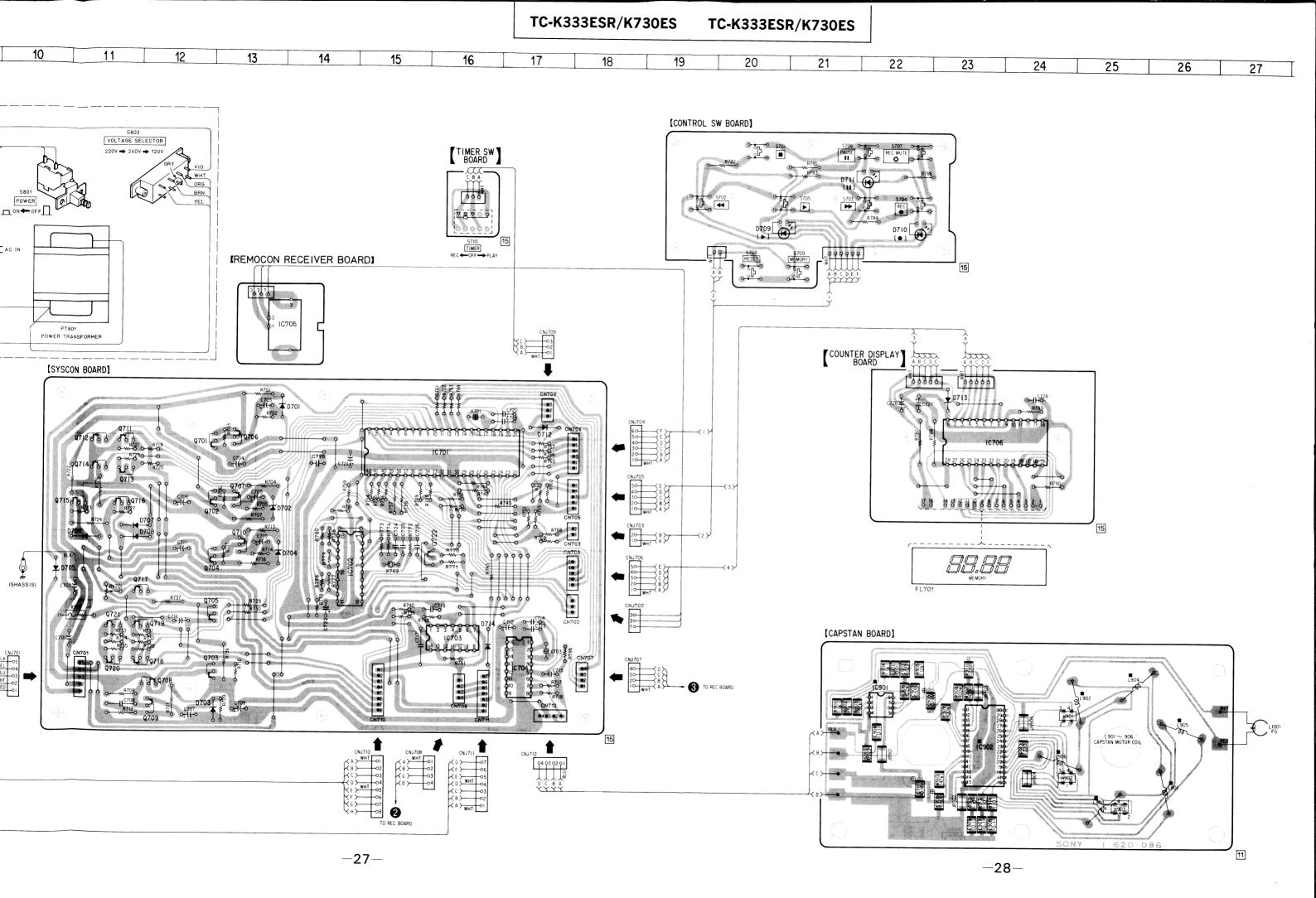
Note:

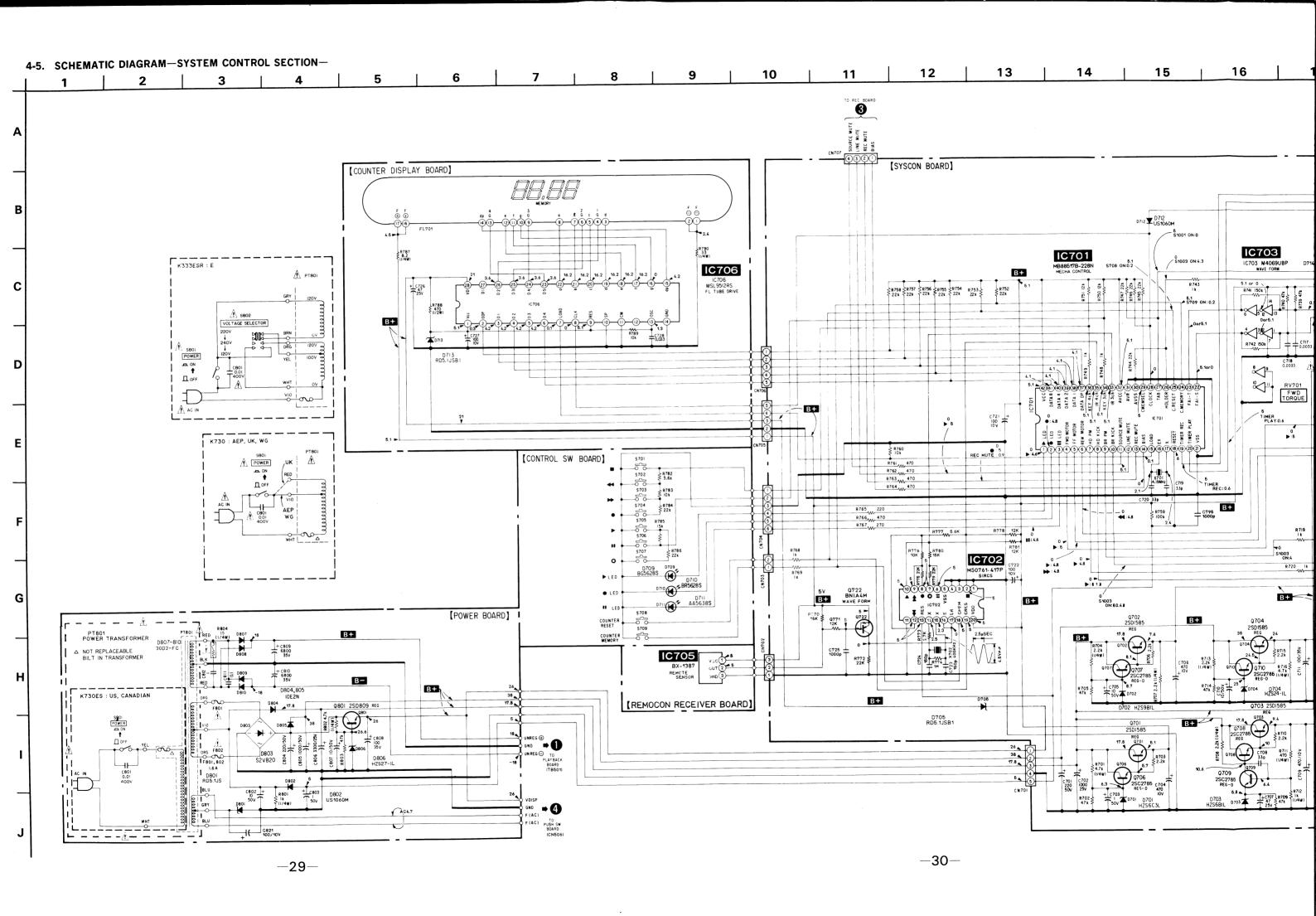
• o----: parts extracted from the component side.

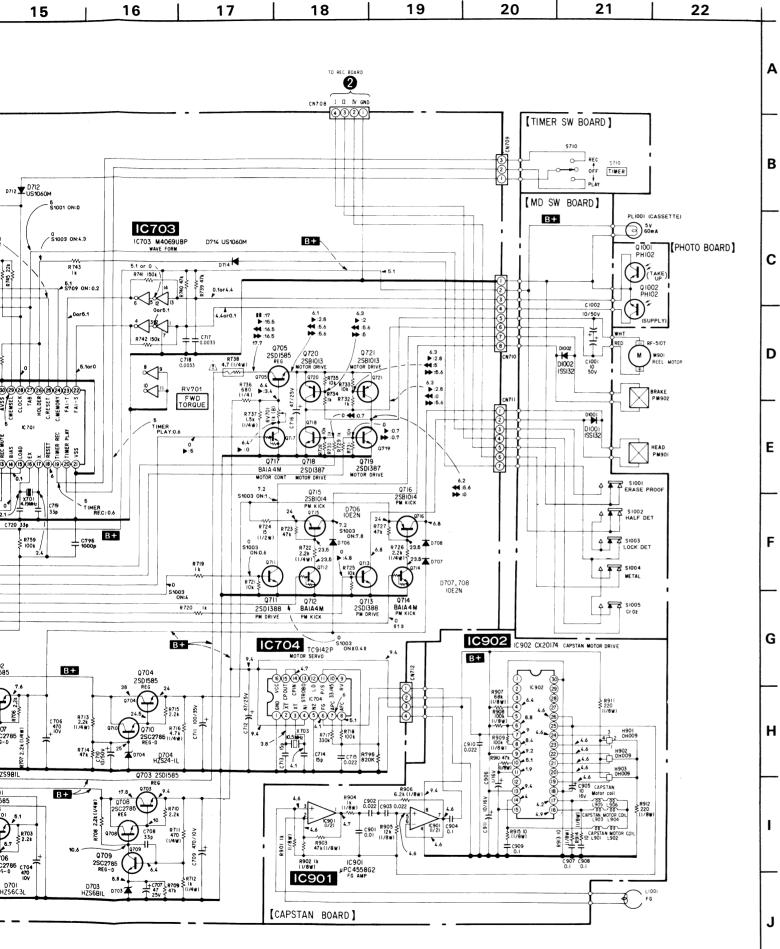
• •——: parts extracted from the conductor side.

• parts mounted on the conductor side.









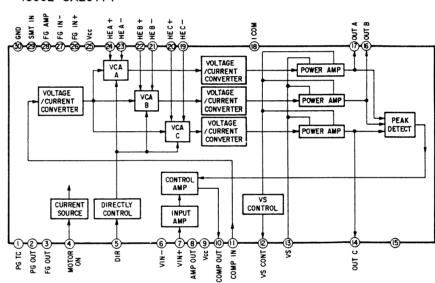
- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- was: fusible resistor.
- B+ : B+ Line
- B- : B- Line
- adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark: STOP
 - (()): Momentary voltage in power switch ON.
- ► : PLAY II : PAUSE
 - : REC **≪** : REW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

Note:

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spéci-

IC902 CX20174



SECTION 5 EXPLODED VIEWS

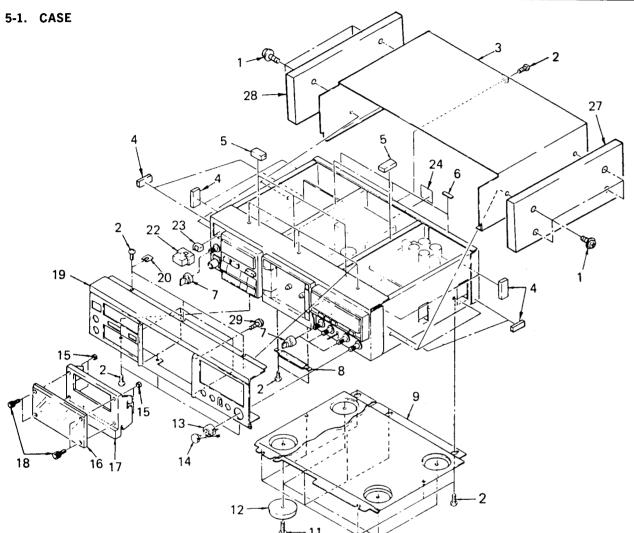
- NOTE: • The mechanical parts with no reference number in the exploded views are not
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be dif-ferent from the parts specified in the components used on the set.
- Color Indication of Appearance Parts (RED) ... KNOB, BALANCE (WHITE)

Cabinet's Color Parts Color The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

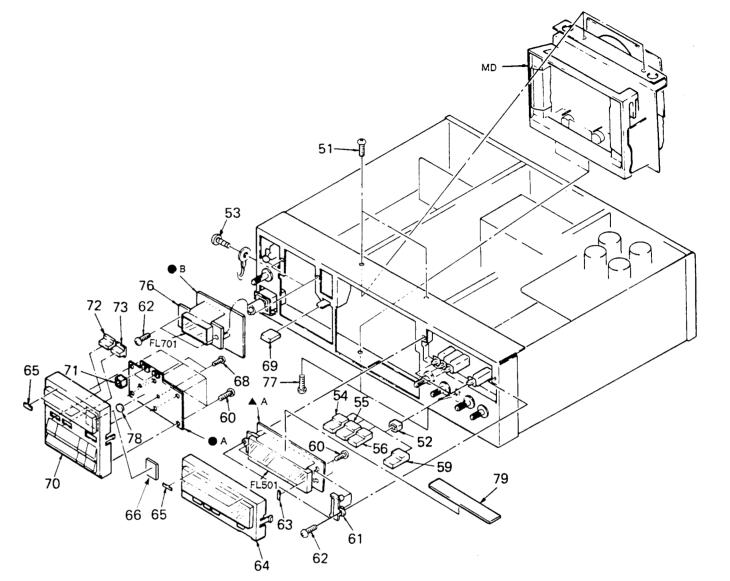
Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.



			& 11	_			
No.	Part No.	Description	Remarks	No.	Part No.	<u>Description</u> Remarks	
1	4-820-330-31 4-885-979-11	(UK)SCREW, BW, PLUS MINUS (EXCEPT UK)SCREW (4X25)		19	X-3304-946-1 X-3304-949-1 X-3304-951-1	(E)PANEL ASSY, FRONT (US,Canadian)PANEL ASSY, FRONT (AEP,UK)PANEL ASSY, FRONT	
2 3 4 5	7-682-547-09 3-318-660-11 9-911-841-XX 9-911-843-XX	SCREW +BV 3X6, S TIGHT CASE CUSHION CUSHION, FLYWHEEL		20 22 23	3-544-028-21 4-908-046-01 4-864-307-00	SPACER KNOB, SQUARE RING	
6 7 8 9	9-911-837-XX 3-304-929-11 3-304-962-00 *3-350-419-01 3-703-685-21	KNOB, HEADPHONE COVER, MD BOARD, BOTTOM		24	*3-350-430-01 *3-350-431-01 *3-350-432-01 *3-350-433-01	(E)LABEL, MODEL NUMBER (US,Canadian)LABEL, MODEL NUMBER (AEP)LABEL, MODEL NUMBER (UK)LABEL, MODEL NUMBER	
11 12 13	7-682-562-09 X-3304-944-1 X-3304-924-1	SCREW +B 4X10 FOOT ASSY KNOB (LEFT) ASSY, REC		27	X-3304-936-1 X-3304-948-1	(US,Canadian,AEP,E)PLATE (RIGHT) ASSY, SIDE (WG)PLATE (RIGHT) ASSY, SIDE	
14	X-3304-925-1	KNOB (RIGHT) ASSY, REC		28	X-3304-937-1	(US,Canadian,AEP,E)	
15 16	7-622-207-05 3-350-410-01	N 2.6, TYPE 2 WINDOW, CASSETTE			X-3304-947-1	PLATE (LEFT) ASSY, SIDE (WG)PLATE (LEFT) ASSY, SIDE	
17 18	3-350-415-11 7-683-412-05	LID, CASSETTE BOLT, HEXAGON SOCKET 2.6X6	ļ	29	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	

5-2. FRONT PANEL



lo.	Part No.	Description	Remarks	No.	Part No.	<u>Description</u>	Remarks	102 103 104 105	*3-304-987-01 4-886-821-01 *3-318-658-11 7-682-547-09
51	7-682-547-09	SCREW +BV 3X6, S TIGHT		66	*3-318-670-01	COVER, RAY CATCHER		103	7-002-347-03
52	4-864-307-00	RING		68	7-621-772-50	SCREW +B 2X10		106	4-916-783-01
53	7-685-870-09	SCREW +BVTT 3X5 (S)		69	3-318-643-01	BUTTON, EJECT		108	3-646-090-11
54	3-318-652-41	PUSH BUTTON						109	*4-861-002-00
				70	X-3304-927-2	(WG)ESCUTCHEON ASSY, CONTROL	BUTTON	110	3-703-685-21
55	3-318-652-51	PUSH BUTTON			x-3304-950-1	(US,Canadian,AEP,UK,E)		111	7-682-547 - 04
56 59		PUSH BUTTON PUSH BUTTON				ESCUTCHEON ASSY, CONTROL	BULLON	112	7 (05 070 01
60	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S		71	*3-311-546-00	CUSHION, SWITCH, MONITOR		113 117	7-685-870 - 01 *4-363-146-00
00	7 003-133-13	SOREM IDII 2.000 TITEE N-3		72	3-311-506-01	BUTTON, COUNTER		120	7-685-861-09
61	*3-318-632-01	BRACKET, METER		73	3-311-506-11	BUTTON, COUNTER		121	3-575-524-00
62	7-685-861-09	SCREW +BVTT 2.6X5 (S)			*3-318-651-01	BRACKET, COUNTER		122	*3-318-628-01
63	9-911-837-XX	CUSHION (B), FILTER		77	7-685-870-01	SCREW +BVTT 3X5 (S)			
64	X-3304-933-1	ESCUTCHEON ASSY, METER						123	3-534-238-XX
65	3-553-566-00	CUSHION			*3-312-975-01	SPACER		124	*3-575-502-00
				79	9-911-863-XX	SPACER		127	7-682-147-15
				FL501	1-519-497-11	INDICATOR TUBE, FLUORESCENT	WTEO.\	128	*3-318-666-01
				FL701	1-519-409-11	INDICATOR TUBE, FLUORESCENT (COU	NIER)	129	4-870-539-00
				•				130 131 132 901	4-886-821-11 7-685-646-79 *3-701-947-13 *A-2010-295-A

Note:
The components ide
fied by mark for
ted line with mark
are critical for safety
Replace only with

number specified.



1	7-682-647-09
2	*3-304-987-01
3	4-886-821-01
4	*3-318-658-11
5	7-682-547-09
6 8 9 0	4-916-783-01 3-646-090-11 *4-861-002-00 3-703-685-21 7-682-547-04
3	7-685-870-01
7	*4-363-146-00
0	7-685-861-09
1	3-575-524-00
2	*3-318-628-01
3	3-534-238-XX
4	*3-575-502-00
7	7-682-147-15

Part No.

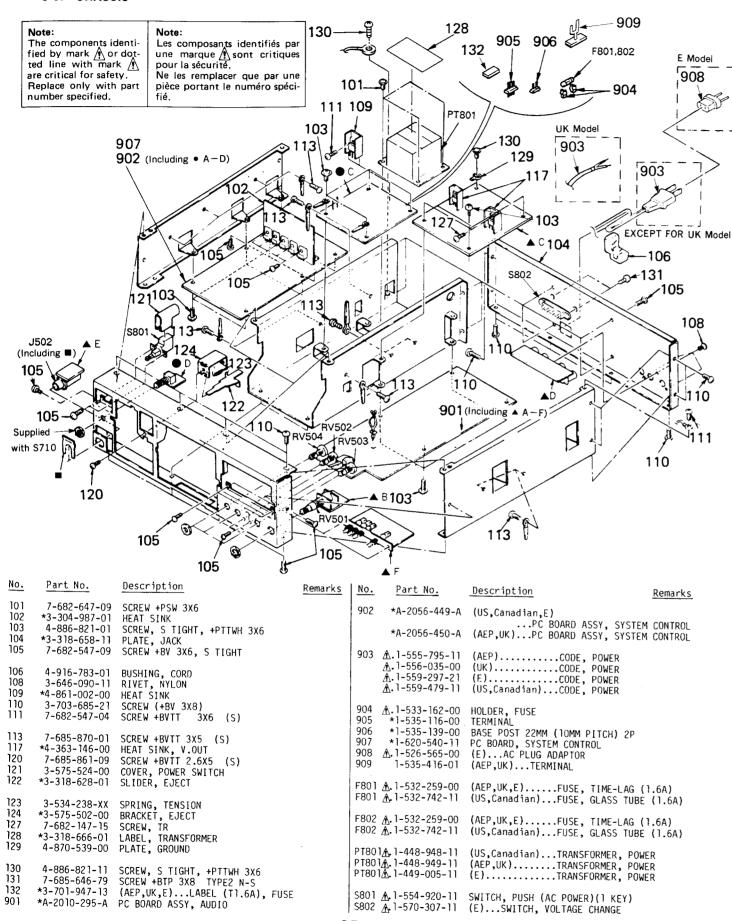
5-3. CHASSIS

Remarks

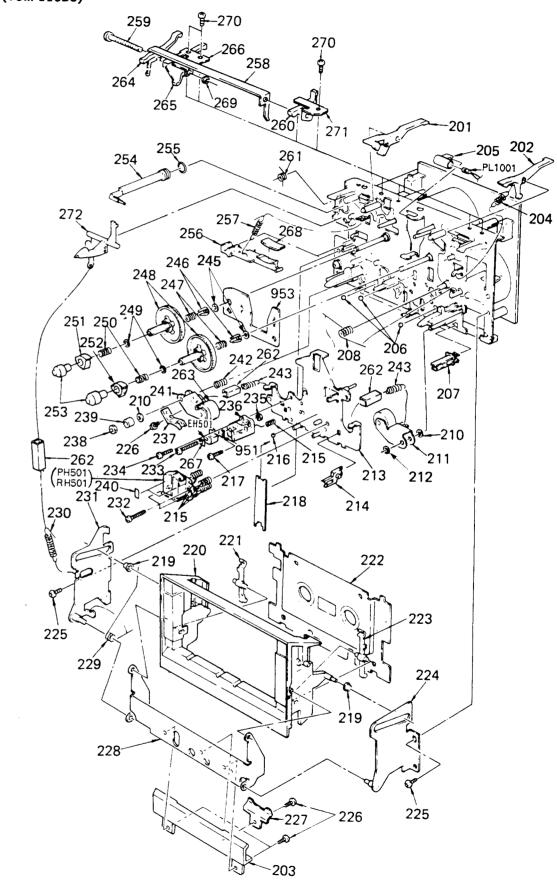
ONTROL BUTTON

ONTROL BUTTON

IT (COUNTER)

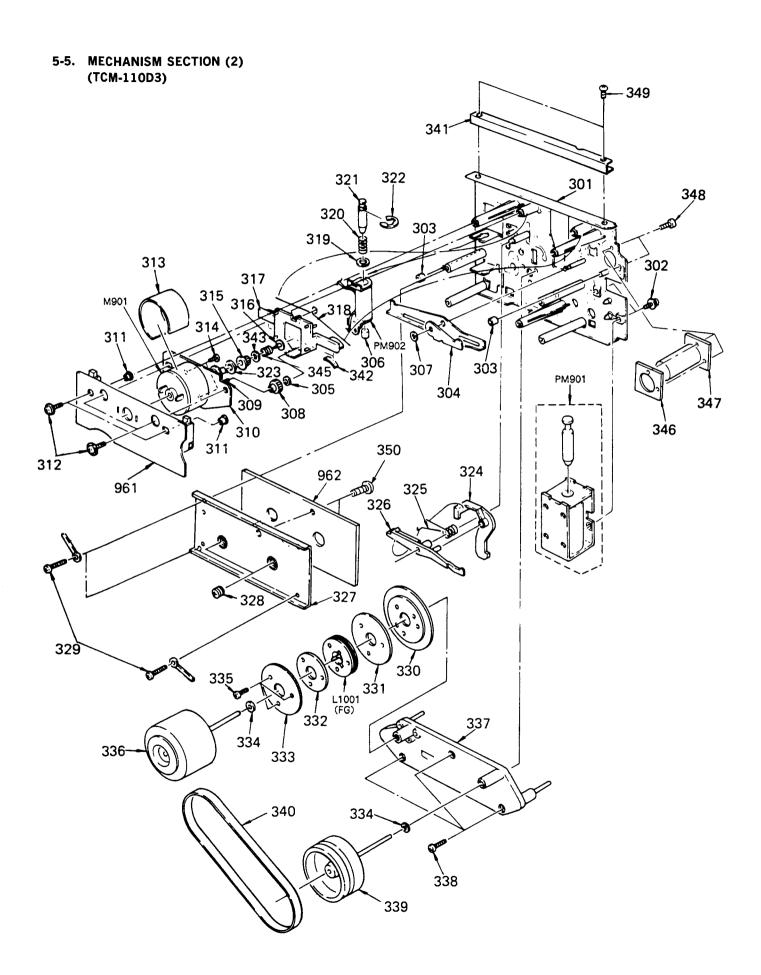


5-4. MECHANISM SECTION (1) (TCM-110D3)



-36-

No.	Part No.	Description	Remarks	No.	Part No.	<u>Description</u>	Remarks
201 202 203 204 205	3-575-331-00 *3-318-406-11 3-575-358-00	LEVER, DETECTION, REC LEVER, DETECTION, HALF PLATE, ORNAMENTAL, HEAD SPRING, TENSION HOLDER, LAMP		242 243 245 246 247	3-537-213-00 3-575-481-00 3-701-439-11 3-318-405-01 3-571-850-11	SPRING, COMPRESSION SPRING, TENSION WASHER RETAINER, SPRING SPRING, COMPRESSION	
206 207 208 210 211	7-671-112-11 *3-575-378-00 3-575-351-00 3-701-439-21 X-3575-380-1	GUIDE, LEAD SPRING		248 249 250 251 252	3-318-438-01 3-558-708-11 3-576-921-00 3-531-760-00 3-558-339-00	TABLE, REEL WASHER, STOPPER SPRING, COMPRESSION CLAW, REEL SPINDLE CLAW (R), REEL TABLE	
212 213 214 215 216	X-3575-323-0 *3-304-963-00	STOP RING 2.3, TYPE -E CHASSIS ASSY, HEAD RETAINER, LEAD SPRING, COMPRESSION BALL, STEEL		253 254 255 256 257	3-576-983-01 3-575-459-00 3-575-392-00 X-3575-310-0 3-307-381-00		
217 218 219 220 221	*3-575-377-00 3-575-348-00 3-575-355-31	SCREW +B 2.6X5 SPRING ROLLER, GUIDE, THREADING HOLDER, CASSETTE SPRING (LEFT)		258 259 260 261 262	*3-306-281-00	LEVER, ERASING PROTECTION SHAFT, DETECTION LEVER LEVER, REC DETECTION, REVERSE SPRING CUSHION	
222 223 224 225 226	3-555-113-00 *X-3575-339-0	PLATE ASSY, ORNAMENTAL SPRING (RIGHT) PLATE (RIGHT) ASSY, FULCRUM SCREW +PTT 2.6X5 (S) SCREW +B 2X4	-	264 265 266 267 268	3-575-446-00	SPRING	
227 228 229 230 231	3-306-215-00 3-575-356-00 3-575-364-00	PLATE, SHIELD, HEAD LEVER, FULCRUM, HOLDER SPRING SPRING, TENSION PLATE (LEFT) ASSY, FULCRUM		269 270 271 272 951	7-685-870-01 *X-3575-364-0 3-575-448-00	STOP RING 2.0, TYPE -E SCREW +BYTT 3X5 (S) BRACKET ASSY, LEVER LEVER, LOCK PC BOARD, ERASE HEAD	
232 233 234 235 236	7-621-772-20 7-622-205-05	SCREW +B 2X16		PH501	1-543-358-11	PC BOARD, PHOTO HEAD, MAGNETIC (ERASE) HEAD, REC/PB RPA230-3602C (including RH501) LAMP, PILOT	
237 238 239 241	7-684-023-04 3-491-191-00	GUIDE (S), TAPE N 3, TYPE 2 COLLAR PINCH LEVER (S) ASSY					



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
301 302 304 305 306	7-682-649-09 *3-306-260-00 3-558-708-01	CHASSIS ASSY, MECHANICAL SCREW +PSW 3X10 LEVER, FWD WASHER, STOPPER ARBOR, FIXED		328 329 330 331 332	7-682-647-09 *3-310-831-01 *3-576-810-00	SCREW, THRUST SCREW +PS 3X6 PLATE, SHIELD, MOTOR PLATE, RETURN CIRCUIT WASHER, INSULATING	
307 308 309 311 312	3-575-332-00 3-575-304-00 3-306-277-00	WASHER, STOPPER GEAR, FR SHAFT, GEAR, FR LIFTER, PC BOARD SCREW, TOTSU PTPWH 3X8, TYPE2		333 334 335 336 337	X-3575-377-1	PLATE, FG WASHER SCREW +B 2.6X12 FLYWHEEL (TAKE-UP) ASSY BASE ASSY, CAPSTAN	
313 314 315 316 317	7-621-775-10 3-575-324-00 3-575-327-00	PLATE (D), SHIELD, MOTOR SCREW +B 2.6X4 GEAR, LIMITER STOPPER PLATE ASSY, BRAKE		338 339 340 341 342	X-3575-378-1 3-576-812-00	SCREW +PTT 2.6X5 (S) FLYWHEEL (SUPPLY) ASSY BELT, CAPSTAN BRACKET, MD SHOE, BRAKE	
318 319 320 321 322	3-575-415-11			343 344 345 346 347	3-701-441-11 3-701-748-00 3-575-487-01 *3-318-439-01 *3-318-440-01	WASHER CLAMP SPRING, COMPRESSION BRACKET CYLINDER	
323 324 325 326 327	3-575-318-00 3-575-458-00 3-575-460-00	FELT, LIMITER LEVER, LOCK, TUNING SPRING LEVER, SELECT TUNE RETAINER ASSY, THRUST		961 962 M901 PM901 PM902	*1-620-542-11 *1-620-086-11 X-3575-382-1 1-454-333-00 1-454-291-00	PC BOARD, MD SWITCH PC BOARD, CAPSTAN MOTOR ASSY, REEL SOLENOID, PLUNGER SOLENOID, PLUNGER	

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS: MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

• MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD... The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	o. Part No.	Description				Ref.No.	Part No.	Description			
901	*A-2010-295-A	PC BOARD ASS	SY, AUDIO			C128 C129	1-162-211-31 1-130-475-00	CERAMIC MYLAR	33PF 0.0022MF	5% 5%	50V 50V
902	*A-2056-449-A					C130	1-130-475-00	MYLAR	0.0022MF	5%	50 V
	*A-2056-450-A		PC BOARD ASS PC BOARD ASS			C131 C132	1-130-478-00 1-136-173-00	MYLAR FILM	0.0039MF 0.47MF	5% 5%	50V 50V
903	A.1-555-795-11		CODE, P			C133	1-136-167-00	FILM	0.15MF	5%	50V
	⚠.1-556-035-00 ⚠.1-559-297-21 ⚠.1-559-479-11	(E)	CODE, P CODE, P n)CODE, P	OWER		C134 C135	1-136-155-00 1-123-380-00	FILM ELECT	0.015MF 1MF	5% 20%	50 V 50 V
904	1-533-162-00	HOLDER, FUSE	<u> </u>			C136	1-136-169-00	FILM	0.22MF	5%	50 V
905 906	*1-535-116-00 *1-535-139-00	TERMINAL BASE POST 22		TCUl OD		C137 C138	1-136-163-00 1-136-162-00	FILM FILM	0.068MF 0.056MF	5% 5%	50V 50V
			•	•		C139	1-123-380-00	ELECT	IMF	20%	50 V
907 908	*1-620-540-11 A. 1-526-565-00	PC BOARD, SY (E)AC PLU		L		C140	1-130-480-00	MYLAR	0.0056MF	5%	50V
909	1-535-416-01	(AEP,UK)	TERMINAL			C141 C142	1-136-153-00 1-124-929-11	FILM ELECT	0.01MF 22MF	5% 20%	50V 63V
951 953	*1-608-268-00 *1-603-823-00	PC BOARD, ER				C143	1-124-929-11	ELECT	22MF	20%	63V
961	*1-620-542-11	PC BOARD, PH PC BOARD, ME	SWITCH			C144	1-130-473-00	MYLAR	0.0015MF	5%	50 V
962	*1-620-086-11	PC BOARD, CA	APSTAN			C146	1-136-164-00	FILM	0.082MF	5%	50 V
C101 C102		FILM ELECT	0.027MF 22MF	3% 20%	100V 63V	C147 C148	1-136-155-00 1-136-160-00	FILM FILM	0.015MF 0.039MF	5% 5%	50V 50V
C103		ELECT	22MF	20%	63V	C149	1-136-156-00	FILM	0.018MF	5%	50 V
C104		FILM	0.22MF	5%	50V	C150	1-136-160-00	FILM	0.039MF	5%	50V
C105 C106		MYLAR MICA	0.0015MF 56PF	5% 5%	50V 500V	C151 C152	1-136-157-00 1-130-476-00	FILM MYLAR	0.022MF 0.0027MF	5% 5%	50V 50V
C107	1-130-478-00	MYLAR	0.0039MF	5%	50V	C153	1-124-929-11	ELECT	22MF	20%	63V
C108 C109	1-109-619-00	MICA MYLAR	180PF 0.0033MF	5% 5%	500y 50V	C154 C155	1-130-473-00 1-107-157-00	MYLAR MICA	0.0015MF 27PF	5% 5%	50V 500V
				-							
C110 C111	1-130-475-00	MYLAR MYLAR	0.0022MF 0.0022MF	5% 5%	50V 50V	C156 C157	1-107-157-00 1-124-767-00	MICA ELECT	27PF 2.2MF	5% 20%	500V 50V
C112	1-130-478-00	MYLAR	0.0039MF	5%	50 V	C158	1-124-925-11	ELECT	2.2MF	20%	50 V
C113 C114	1-136-173-00 1-136-167-00	FILM FILM	0.47MF 0.15MF	5% 5%	50V 50V	C159 C160	1-124-927-11 1-123-369-00	ELECT ELECT	4.7MF 4.7MF	20% 20%	50V 63V
C115	1-136-155-00	FILM	0.015MF	5%	50V	C161	1-107-163-00	MICA	47PF	5%	500 v
C116	1-123-380-00	ELECT	1MF	20%	50 V	C201	1-130-893-00	FILM	0.027MF	3%	100V
C117 C118	1-136-169-00 1-136-163-00	FILM FILM	0.22MF 0.068MF	5% 5%	50V 50V	C202 C203	1-124-929-11 1-124-929-11	ELECT	22MF 22MF	20% 20%	63V 63V
C119	1-136-162-00	FILM	0.056MF	5%	50 V	C204	1-136-169-00	FILM	0.22MF	5%	50V
C120 C121	1-123-380-00	ELECT	1MF	20%	50 V	C205 C206	1-130-473-00 1-107-165-00	MYLAR MICA	0.0015MF 56PF	5% 5%	50V 500V
	1-130-480-00	MYLAR	0.0056MF	5%	50 V						
C122 C123	1-136-153-00 1-124-929-11	FILM ELECT	0.01MF 22MF	5 % 20 %	50V 63V	C207 C208	1-130-478-00 1-109-619-00	MYLAR MICA	0.0039MF 180PF	5% 5%	50V 500 V
C124	1-124-929-11	ELECT	22MF	20%	63V	C209	1-130-477-00	MYLAR	0.0033MF	5%	50V
C125 C126	1-123-369-00 1-124-767-00	ELECT ELECT	4.7MF 2.2MF	20 % 20 %	63V 50V	C210 C211	1-130-475-00 1-130-475-00	MYLAR MYLAR	0.0022MF 0.0022MF	5% 5%	50 V 50 V
C127	1-107-159-00		33PF	5%	500V	C2 12	1-130-478-00	MYLAR	0.0039MF	5%	507

C213 1-136-173-00 FILM	Dof No	Dant No	Docomination			1	Ref.No.	Dant No	Docenintion			
C214 1-136-167-00 FILM 0.015MF 55 50V C512 1-162-282-31 CERAMIC 100PF 121-161-162-282-31 CERAMIC 100PF 121-162-282-31 CERAMIC 100PF 122-282-31 CERAMIC 100PF 121-162-282-31 CERAMIC 100PF 121-162-282-31 CERAMIC 100PF 122-162-162-162-162-162-162-162-162-162-	Ref.No.	Part No.	Description					Part No.	Description	-		
C219 1-136-169-00 FILM 0.066MP 5% 50V C516 1-124-925-11 ELECT 10MF 1.066MP 1.066MP 5% 50V C516 1-124-925-11 ELECT 10MF 1.066MP	C2 14	1-136-167-00	FILM	0.15MF	5 %	507	C511	1-162-282-31	CERAMIC	100PF	10% 10% 10%	50V 50V 50V
C220	C217	1-136-169-00	FILM	0.22MF	5 %	507	C514	1-124-925-11	ELECT	2.2MF	10% 20% 20%	50V 50V 63V
C223 1-124-929-11 ELECT 22MF 20% 63V C520 1-123-35-200 ELECT 47MF 20% 63V C521 1-123-35-200 ELECT 47MF 20% 63V C521 1-124-477-11 ELECT 47MF 20% 63V C522 1-124-477-11 ELECT 47MF 20% 63V C523 1-162-291-31 CERAMIC 500PF 20% 63V C523 1-162-291-31 ELECT 1000MF 20% 63V C523 1-162-291-31 CERAMIC 50PF 50V C523 1-162-291-31 CERAMIC 50PF 5	C220	1-123-380-00	ELECT	1MF	20%	50V	C517	1-123-333-00	ELECT	100MF	20% 20% 20%	63V 16V 16V
C226 1-124-767-00 ELECT 2.2MF 20% 50V C525 1-136-294-31 ELECT 47MF 20% 63V C525 1-162-294-31 ELECT 47MF 20% 63V C525 1-162-294-31 ELECT 47MF 20% 63V C526 1-133-369-00 ELECT MF 20% 63V C526 1-133-369-00 ELECT MF 20% 63V C526 1-133-369-00 ELECT MF 20% 63V C702 1-24-472-11 ELECT 47MF 20% 63V C702 1-24-472-11 ELECT 10MF 20% 63V C702 1-24-472-11 ELECT 10MF 20% 63V C703 1-24-472-11 ELECT 10MF 20% 63V C703 1-24-472-11 ELECT 10MF 20% 63V C703 1-24-472-11 ELECT 10MF 20% 63V C704 1-24-472-11 ELECT 10MF 20% 63V C705 1-23-395-10 ELECT 10MF 20% 63V C706 1-24-472-11 ELECT 10MF 20% 63V C706 1-24-472-11 ELECT 470MF 20% 63V C707 1-24-472-11 ELECT 470MF 20% 63V C708 1-162-203-31 CERAMIC 150PF 100MF 20% 63V C708 1-162-203-31 CERAMIC 150PF 100MF 20% 63V C709 1-124-472-11 ELECT 470MF 20% 63V C709 1-124-472-11 ELECT 47	C223	1-124-929-11	ELECT	22MF	20%	63V	C520	1-123-332-00	ELECT	4 7MF	20% 20% 20%	25V 25V 25V
C229 1-130-475-00 MYLAR 0.0022WF 5% 50V C528 1-131-368-00 TANTALIM 3.3MF 2.00022WF 5% 50V C530 1-130-467-00 MYLAR 470PF 8.00022WF 5% 50V C530 1-130-467-00 MYLAR 470PF 8.00022WF 5% 50V C530 1-130-467-00 MYLAR 470PF 8.00022WF 5% 50V C700 1-124-991-11 ELECT 1000WF 2.00022WF 5% 50V C700 1-124-991-11 ELECT 1000WF 2.00022WF 5% 50V C700 1-124-491-11 ELECT 1000WF 2.00022WF 5% 50V C700 1-124-472-11 ELECT 1000WF 2.00022WF 5% 50V C700 1-124-472-11 ELECT 470WF 2.00022WF 5% 50V C710 1-123-875-11 ELECT 1000WF 2.00022WF 5% 50V C710 1-123-875-11 ELECT 1000WF 2.00022WF 5% 50V C710 1-124-472-11 ELECT 1000WF 2.00022W	C226	1-124-767-00	ELECT	2.2MF	20%	507	C524	1-124-477-11	ELECT	47MF	10% 20% 10%	50V 25V 50V
C232 1-136-167-00 FILM	C229	1-130-475-00	MYLAR	0.0022MF	5%	50V	C527	1-162-291-31	CERAMIC	560PF	10% 10% 20%	50V 50V 16V
C235 1-123-380-00 ELECT 1MF 20% 50V C702 1-124-557-11 ELECT 1000MF 2 C236 1-136-169-00 FILM 0.22MF 5% 50V C703 1-124-499-11 ELECT 100MF 2 C238 1-136-162-00 FILM 0.056MF 5% 50V C705 1-123-3875-11 ELECT 10MF 2 C238 1-136-162-00 FILM 0.056MF 5% 50V C706 1-124-472-11 ELECT 10MF 2 C238 1-136-162-00 FILM 0.056MF 5% 50V C706 1-124-472-11 ELECT 10MF 2 C238 1-136-162-00 FILM 0.056MF 5% 50V C706 1-124-472-11 ELECT 10MF 2 C240 1-130-480-00 FILM 0.01MF 5% 50V C706 1-124-472-11 ELECT 47MF 2 C241 1-136-153-00 FILM 0.01MF 5% 50V C708 1-124-477-11 ELECT 47MF 2 C241 1-136-153-00 FILM 0.01MF 5% 50V C709 1-124-472-11 ELECT 47MF 2 C241 1-136-153-00 FILM 0.015MF 5% 50V C709 1-124-472-11 ELECT 47MF 2 C244 1-130-473-00 MYLAR 0.0015MF 5% 50V C710 1-123-875-11 ELECT 10MF 2 C246 1-136-164-00 FILM 0.082MF 5% 50V C711 1-124-472-11 ELECT 10MF 2 C246 1-136-164-00 FILM 0.033MF 5% 50V C712 1-124-477-11 ELECT 47MF 2 C248 1-136-156-00 FILM 0.033MF 5% 50V C713 1-162-203-31 CERAMIC 15PF 5 C249 1-136-156-00 FILM 0.033MF 5% 50V C714 1-162-203-31 CERAMIC 15PF 5 C249 1-136-156-00 FILM 0.033MF 5% 50V C715 1-136-157-00 FILM 0.022MF 5 C250 1-136-157-00 FILM 0.022MF 5% 50V C716 1-124-477-11 ELECT 47MF 2 C250 1-136-157-00 FILM 0.022MF 5% 50V C716 1-162-213-31 CERAMIC 15PF 5 C250 1-136-157-00 FILM 0.022MF 5% 50V C716 1-162-213-31 CERAMIC 0.0033MF 2 C252 1-130-476-00 MYLAR 0.0027MF 5% 50V C716 1-162-213-31 CERAMIC 0.0033MF 2 C252 1-130-476-00 MYLAR 0.0027MF 5% 50V C718 1-162-213-31 CERAMIC 0.0033MF 2 C252 1-130-476-00 MYLAR 0.0027MF 5% 50V C723 1-162-213-31 CERAMIC 0.0033MF 2 C252 1-124-767-00 ELECT 2.2MF 20% 50V C723 1-162-244-31 CERAMIC 150PF 1 C254 1-130-473-00 ELECT 2.2MF 20% 63V C726 1-162-243-31 CERAMIC 150PF 1 C256 1-107-157-00 MICA 27PF 5% 50V C723 1-162-243-31 CERAMIC 150PF 1 C256 1-124-975-11 ELECT 100MF 20% 63V C726 1-124-477-11 ELECT 100MF 20% 63V C726 1-124-	C232	1-136-173-00	FILM	0.47MF	5%	507	C530	1-130-467-00	MYLAR	470PF	5% 5% 5%	100V 50V 50V
C238 1-136-162-00 FILM 0.056MF 5% 50V C705 1-123-875-11 ELECT 10MF 20% 50V C706 1-124-472-11 ELECT 470MF 2 C240 1-130-480-00 MYLAR 0.0056MF 5% 50V C706 1-124-472-11 ELECT 470MF 2 C241 1-136-153-00 FILM 0.01MF 5% 50V C708 1-162-211-31 GERAMIC 339F 5 C242 1-124-929-11 ELECT 22MF 20% 63V C709 1-124-472-11 ELECT 470MF 2 C243 1-124-929-11 ELECT 22MF 20% 63V C710 1-123-875-11 ELECT 470MF 2 C244 1-130-473-00 MYLAR 0.0015MF 5% 50V C711 1-124-122-11 ELECT 100MF 2 C246 1-136-164-00 FILM 0.015MF 5% 50V C712 1-124-477-11 ELECT 47MF 2 C247 1-136-155-00 FILM 0.015MF 5% 50V C712 1-124-477-11 ELECT 47MF 2 C248 1-136-160-00 FILM 0.039MF 5% 50V C714 1-162-203-31 GERAMIC 15PF 5 C249 1-136-156-00 FILM 0.039MF 5% 50V C714 1-162-203-31 GERAMIC 15PF 5 C249 1-136-150-00 FILM 0.039MF 5% 50V C714 1-162-203-31 GERAMIC 15PF 5 C250 1-136-150-00 FILM 0.039MF 5% 50V C715 1-136-157-00 FILM 0.0022MF 5% 50V C716 1-124-477-11 ELECT 47MF 2 C251 1-136-157-00 FILM 0.022MF 5% 50V C716 1-124-477-11 ELECT 47MF 2 C252 1-130-476-00 MYLAR 0.0015MF 5% 50V C718 1-161-327-00 GERAMIC 0.0033MF 2 C253 1-124-929-11 ELECT 22MF 20% 63V C719 1-162-211-31 GERAMIC 33PF 5 C254 1-130-473-00 MYLAR 0.0015MF 5% 50V C720 1-162-211-31 GERAMIC 33PF 5 C255 1-124-767-00 MICA 27PF 5% 500V C720 1-162-211-31 GERAMIC 33PF 5 C256 1-107-157-00 MICA 27PF 5% 500V C720 1-162-211-31 GERAMIC 33PF 5 C256 1-124-95-11 ELECT 2.2MF 20% 50V C722 1-124-443-00 ELECT 100MF 2 C256 1-124-767-00 ELECT 2.2MF 20% 50V C722 1-124-443-00 ELECT 100MF 2 C257 1-124-767-00 ELECT 2.2MF 20% 50V C723 1-162-294-31 GERAMIC 150PF 1 C250 1-123-378-00 ELECT 4.7MF 20% 63V C725 1-162-294-31 GERAMIC 0.001MF 1 C250 1-123-378-00 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 10MF 20% 63V C726 1-1	C235	1-123-380-00	ELECT	1MF	20%	50V	C702	1-124-557-11	ELECT	1000MF	20% 20% 20%	50V 25V 50V
C241 1-136-163-00 FILM	C238	1-136-162-00	FILM	0.056MF	5%	50V	C705	1-123-875-11	ELECT	10MF	20% 20% 20%	10V 50V 10V
C244 1-130-473-00 MYLAR	C241	1-136-153-00	FILM	0.01MF	5 %	507	C708	1-162-211-31	CERAMIC	33PF	20% 5% 20%	25 V 50 V 10 V
C248 1-136-160-00 FILM	C244	1-130-473-00	MYLAR	0.0015MF	5%	507	C711	1-124-122-11	ELECT	100MF	20% 20% 20%	50V 35V 25V
C251 1-136-157-00 FILM 0.022MF 5% 50V C717 1-161-327-00 CERAMIC 0.0033MF 2 C252 1-130-476-00 MYLAR 0.0027MF 5% 50V C718 1-161-327-00 CERAMIC 0.0033MF 2 C253 1-124-929-11 ELECT 22MF 20% 63V C719 1-162-211-31 CERAMIC 33PF 5 C254 1-130-473-00 MYLAR 0.0015MF 5% 50V C720 1-162-211-31 CERAMIC 33PF 5 C255 1-107-157-00 MICA 27PF 5% 500V C721 1-124-443-00 ELECT 100MF 2 C256 1-107-157-00 MICA 27PF 5% 500V C721 1-124-443-00 ELECT 100MF 2 C257 1-124-767-00 ELECT 2.2MF 20% 50V C723 1-162-284-31 CERAMIC 150PF 1 C258 1-124-925-11 ELECT 2.2MF 20% 50V C724 1-162-284-31 CERAMIC 150PF 1 C259 1-124-925-11 ELECT 2.2MF 20% 50V C724 1-162-284-31 CERAMIC 150PF 1 C260 1-123-369-00 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 4.7MF 20% 63V C727 1-124-443-00 ELECT 100MF 2 C501 1-123-377-00 ELECT 4.70MF 20% 63V C727 1-124-443-00 ELECT 100MF 2 C501 1-123-377-00 ELECT 4.70MF 20% 63V C725 1-162-294-31 CERAMIC 0.001MF 1 C502 1-123-377-00 ELECT 4.70MF 20% 63V C725 1-162-294-31 CERAMIC 0.001MF 1 C503 1-123-378-00 ELECT 4.70MF 20% 63V C725 1-162-294-31 CERAMIC 0.001MF 1 C504 1-123-378-00 ELECT 1000MF 20% 63V C801 1-161-744-00 CERAMIC 0.001MF 1 C505 1-124-915-11 ELECT 10MF 20% 63V C803 1-124-99-11 ELECT 1MF 20% 63V C803 1-124-99-11 ELECT 1MF 20% 63V C804 1-124-915-11 ELECT 1MF 20% 63V C805 1-124-915-11 ELECT 10MF 20% 63V C805 1-124-637-11 ELECT 1000MF 20% 63V C805 1-124-637-11 ELECT 1000MF 20	C248	1-136-160-00	FILM	0.039MF	5%	50V	C714	1-162-203-31	CERAMIC	15PF	5% 5% 5%	50V 50V 50V
C254 1-130-473-00 MYLAR	C251	1-136-157-00	FILM	0.022MF	5%	500	C717	1-161-327-00	CERAMIC	0.0033MF	20% 20% 20%	25V 16V 16V
C257 1-124-767-00 ELECT 2.2MF 20% 50V C723 1-162-284-31 CERAMIC 150PF 1 C258 1-124-925-11 ELECT 2.2MF 20% 50V C724 1-162-284-31 CERAMIC 150PF 1 C259 1-124-927-11 ELECT 4.7MF 20% 63V C726 1-122-294-31 CERAMIC 0.001MF 1 C260 1-123-369-00 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 47MF 20 C261 1-107-163-00 MICA 47PF 5% 500V C727 1-124-443-00 ELECT 100MF 20 C501 1-123-377-00 ELECT 470MF 20% 63V C726 1-124-477-11 ELECT 100MF 20% 63V C727 1-124-443-00 ELECT 100MF 20% 63V C727 1-124-443-00 ELECT 100MF 20% 63V C728 1-162-294-31 CERAMIC 0.033MF 5000 C727 1-124-443-00 ELECT 100MF 20% 63V C728 1-161-159-00 FILM 0.033MF 5000 ELECT 1000MF 20% 63V C728 1-161-159-00 FILM 0.033MF 10000 ELECT 1000MF 20% 63V C801 1-161-744-00 CERAMIC 0.001MF 10000 ELECT 1000MF 20% 63V C801 1-161-744-00 CERAMIC 0.001MF 10000 ELECT 1000MF 20% 63V C801 1-123-875-11 ELECT 100 ELECT	C254 C255	1-130-473-00	MYLAR	0.0015MF	5 %	507	C720	1-162-211-31	CERAMIC	33PF	5% 5% 20%	50V 50V 10V
C260 1-123-369-00 ELECT 4.7MF 20% 63V C726 1-124-477-11 ELECT 47MF 20% 63V C727 1-124-443-00 ELECT 47MF 20% 63V C727 1-124-443-00 ELECT 100MF 20% 63V C728 1-136-159-00 FILM 0.033MF 50% 63V C795 1-162-294-31 CERAMIC 0.001MF 1000MF 20% 63V C795 1-162-294-31 CERAMIC 0.001MF 1000MF 20% 63V C795 1-161-744-00 CERAMIC 0.001MF 1000MF 20% 63V C801 1-161-744-00 CERAMIC 0.01MF 1000MF 20% 63V C801 1-123-875-11 ELECT 1000MF 20% 63V C801 1-124-915-11 ELECT 1000MF 20% 63V C801 1-124-911-11 ELECT 10000MF 20% 63V C801 1-124-911-11 ELECT 1000MF 20%	C257 C258	1-124-767-00	ELECT	2.2MF	20%	500	C723	1-162-284-31	CERAMIC	150PF	20% 10% 10%	10 V 50 V 50 V
C502 1-123-377-00 ELECT 470MF 20% 63V C795 1-162-294-31 CERAMIC 0.001MF 10 C503 1-123-378-00 ELECT 1000MF 20% 63V C801 1-161-744-00 CERAMIC 0.01MF 10 C504 1-123-378-00 ELECT 1000MF 20% 63V C802 1-123-875-11 ELECT 10MF 20% 63V C803 1-124-915-11 ELECT 10MF 20% 63V C804 1-124-915-11 ELECT 10MF 20% 63V C804 1-124-911-11 ELECT 220MF 20% 63V C805 1-124-911-11 ELECT 10MF 20% 63V C806 1-124-911-11 ELECT 1000MF 20% 63V C806 1-1	C260	1-123-369-00	ELECT	4.7MF	20%	63V	C726	1-124-477-11	ELECT	47MF	10% 20% 20%	50V 25V 10V
C505 1-124-915-11 ELECT 10MF 20% 63V C803 1-124-499-11 ELECT 1MF 20% 63V C804 1-124-911-11 ELECT 220MF 20% 63V C805 1-124-911-11 ELECT 220MF 20% 63V C805 1-124-911-11 ELECT 1000MF 20% 63V C805 1-124-637-11 ELECT 1000MF 20% 63V C805 1-124-63V C805 1-124-63V C805 1000MF 20% 63V C805 1-124-63V C805 1000MF 20% 63V C805 1000MF 20% 63V C805 1000MF 20% 63V C805 1000MF 20% 6	C502 C503	1-123-377-00	ELECT	470MF	20%	631	C795	1-162-294-31	CERAMIC	0.001MF	5% 10%	50V 50V 400V
C508 3 122 875 11 FLECT 1000MF 20	C505 C506	1-124-915-11	ELECT	10MF	20%	637	C803	1-124-499-11	ELECT	1MF	20% 20% 20%	50V 50V 50V
C500 1-123-075-11 ELECT 10MF 20% 50V C806 1-124-636-00 ELECT 3300MF 20	C508	1-123-875-11	ELECT	10MF	20%	50V	C806	1-124-636-00	ELECT	3300MF	20% 20% 20%	50 V 25 V 50 V

Dof No	Dont No.	Decemintion			1	Ref.No.	Part No.	Descrip	ution
Ref.No.	Part No. 1-124-122-11	Description ELECT	100MF	20%	35V	D513	8-719-114-29	DIODE R	D5.1JS
C809 C810	1-126-129-11 1-126-129-11	ELECT	6800MF 6800MF	20% 20%	35V 35V	D514 D515	8-719-933-71 8-719-933-71	DIODE H	
C811 C812 C821	1-136-165-00 1-136-177-00 1-124-443-00	FILM	0.1MF 1MF 100MF	5% 5% 20%	50V 50V 10V	D516 D701 D702	8-719-114-29 8-719-933-41 8-719-933-57	DIODE R DIODE H DIODE H	ZS6C3L
C901 C902 C903	1-163-063-00	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.022MF	10% 10% 10%	50V 50V 50V	D703 D704 D705	8-719-933-36 8-719-934-13 8-719-114-29	DIODE H DIODE H DIODE R	IZS24-1L
C904 C905 C906	1-124-779-00	CERAMIC CHIP ELECT CHIP TANTAL. CHIP	10MF	20% 10%	50V 16V 16V	D706 D707 D708	8-719-200-77 8-719-200-77 8-719-200-77		0E2N
C907 C908 C909		CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.1MF		50V 50V 50V	D709 D710 D711	8-719-900-79 8-719-956-28 8-719-913-47	DIODE B	
C910 C911 C1001	1-163-063-00 1-124-779-00 1-123-875-11 1-123-875-11	ELECT CHIP ELECT	0.022MF 10MF 10MF 10MF	10% 20% 20% 20%	50V 16V 50V 50V	D712 D713 D714	8-719-912-29 8-719-114-29 8-719-912-20	DIODE R	D5.1JSB1
CN501 CN502	*1-560-062-00 *1-564-507-11 *1-564-506-11	PIN, CONNECT PLUG, CONNEC	OR 4P TOR 4P	20%	504	D801 D802 D803	8-719-114-19 8-719-912-20 8-719-504-60	DIODE 1	
CN504 CN505	*1-560-062-00 *1-560-061-00	PIN, CONNECT PIN, CONNECT	OR 4P OR 3P			D804 D805 D806	8-719-200-77 8-719-200-77 8-719-934-18	DIODE 1	0E2N
CN507 CN508	*1-564-338-61 *1-564-340-00 *1-564-340-71	PIN, CONNECT PIN, CONNECT	OR 6P OR 6P			D807 D808 D809	8-719-230-02 8-719-230-02 8-719-230-02	DIODE 3	0D4
CN510 CN511	*1-564-338-00 *1-564-338-71 *1-564-338-81	PIN, CONNECT PIN, CONNECT	OR 4P OR 4P				8-719-230-02 8-719-107-94 8-719-107-94	DIODE 1	SS132
	*1-564-339-00	-				EH501	1-543-358-11	HEAD, M	AGNETIC (ERASE)
CN702	*1-564-508-11 *1-564-337-00 *1-564-336-00	PIN, CONNECT	OR 3P				A. 1-532-259-00 A. 1-532-742-11		,E)FUSE, TIME-LAG (1.6A) adian)FUSE, GLASS TUBE (1.6A
CN705	*1-564-340-00 *1-564-339-61 *1-564-339-00	PIN, CONNECT	OR 5P			F802 Z	A. 1-532-259-00 A. 1-532-742-11	(US,Can	,E)FUSE, TIME-LAG (1.6A) adian)FUSE, GLASS TUBE (1.6A
	*1-564-338-61 *1-564-338-00						1-519-497-11 1-519-409-11		OR TUBE, FLUORESCENT OR TUBE, FLUORESCENT (COUNTER)
CN709 CN710	*1-564-337-61 *1-564-342-11	PIN, CONNECT PIN, CONNECT	OR 3P OR 8P			Н901 Н902 Н903	8-719-403-79 8-719-403-79 8-719-403-79	ОНОО9-Т ОНОО9-Т ОНОО9-Т	W
CN712	*1-564-341-11 *1-564-507-11 1-466-045-11	PIN, CONNECT PLUG, CONNEC OSCILLATION	TOR 4P				8-759-604-38 8-759-604-44 8-759-602-01	IC M5F7 IC M5F7 IC M522	9M10
CT501	1-141-225-00	CAP, TUNING,	TRIMAR			I C504	8-752-018-80 8-759-602-83	IC CX20 IC M523	
D501 D502 D503	8-719-933-47 8-719-933-71 8-719-912-20		3L			1C506 1C507	8-752-018-80 8-759-981-96	IC CX20	188 60D
D504 D505 D506	8-719-912-20 8-719-912-20 8-719-912-20	DIODE 188120)			1C509 1C510	8-759-961-38	IC RC45 IC UPC4 IC BA61	558C 38
D507 D508	8-719-912-20 8-719-912-20	DIODE 188120)			10512	8-759-982-26 8-759-904-72	IC RC78 IC MSL9	359RS
D509 D510 D511	8-719-912-20 8-719-912-20 8-719-912-20	DIODE 1SS120)			IC702	8-759-938-34 8-759-602-47 8-759-601-45	IC M507	61-417P
D512	8-719-912-20				42		Note: The component fied by mark ted line with mare critical for se Replace only w number specified	or dot- hark 🚹 lfety. ith part	Note: Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	<u>Description</u>	Ref.No.	Part No.	Descripti	<u>on</u>	
IC705	8-759-201-58 8-741-138-70 8-759-905-48	IC BX-1387	Q504 Q505 Q506	8-729-900-36 8-729-900-36 8-729-900-36	TRANSISTO	R DTC124ES R DTC124ES R DTC124ES	
1C901 1C902	8-759-100-96 8-752-017-40	IC UPC4558G2 IC CX20174	Q507 Q508 Q509	8-729-900-36 8-729-281-53 8-729-281-53	TRANSISTO	R DTC124ES R 2SC1815GR R 2SC1815GR	
J501 J502	1-507-796-71	PLATE, PIN-JACK (LINE IN/OUT) JACK (HEADPHONES)	Q510 Q511	8-729-178-54 8-729-900-63	TRANSISTOI TRANSISTOI	R 2SC2785 R DTA124ES	
JR902	1-216-296-00 1-216-296-00 1-216-296-00	METAL GLAZE 0 5% 1/8W	Q512 Q513 Q514	8-729-900-36 8-729-117-54 8-729-178-54	TRANSISTO TRANSISTO TRANSISTO		
JR904 JR905	1-216-296-00 1-216-296-00		Q515 Q516	8-729-900-65 8-729-900-65	TRANSISTO	R DTA144ES	
L101 L102 L103	1-408-924-00 1-408-925-11 1-408-920-00	INDUCTOR 12MMH	Q517 Q518	8-729-900-65 8-729-900-65	TRANSISTO TRANSISTO	R DTA144ES R DTA144ES	
L104 L105 L106	1-408-918-11 1-408-916-11 1-408-925-11	INDUCTOR 3.3MMH INDUCTOR 2.2MMH INDUCTOR 12MMH	Q519 Q520 Q521	8-729-900-65 8-729-900-65 8-729-900-89	TRANSISTO	R DTA144ES	
L201 L202 L203	1-408-924-00 1-408-925-11	INDUCTOR 10MMH	Q701 Q702 Q703	8-729-107-25 8-729-107-25 8-729-107-25	TRANSISTO	R 2SD1585-L R 2SD1585-L R 2SD1585-L	
L204 L205 L206	1-408-918-11 1-408-916-11	INDUCTOR 3.3MMH INDUCTOR 2.2MMH	Q704 Q705 Q706	8-729-107-25 8-729-107-25 8-729-178-54		R 2SD1585-L R 2SD1585-L R 2SC2785	
L501 L502 L503	1-408-925-11 1-410-525-11 1-410-525-11 1-410-525-11	INDUCTOR 220UH INDUCTOR 220UH INDUCTOR 220UH	Q707 Q708 Q709	8-729-178-54 8-729-178-54 8-729-178-54	TRANSISTOI TRANSISTOI TRANSISTOI	R 2SC2785	
LPF101	1-459-426-00 1-236-087-11 1-236-087-11	COIL (FG) FILTER, LOW PASS FILTER, LOW PASS	Q710 Q711 Q712	8-729-178-54 8-729-802-34 8-729-900-80	TRANSISTO TRANSISTO TRANSISTO	R 2SD1388	
M901	X-3575-382-1	MOTOR ASSY, REEL	Q713 Q714 Q715	8-729-802-34 8-729-900-80 8-729-802-22	TRANSISTOR TRANSISTOR	R DTC144ES	
PH501	8-825-770-51	HEAD, REC/PB RPA230-3602C (including RH501)	Q716	8-729-802-22	TRANSISTO	R 2SB1014	
PL1001	1-518-313-00	LAMP, PILOT	Q717 Q718	8-729-900-80 8-729-801-93	TRANSISTO	R DTC144ES R 2SD1387	
PM902	1-454-291-00	SOLENOID, PLUNGER SOLENOID, PLUNGER	Q719 Q720 Q721	8-729-801-93 8-729-801-83 8-729-801-83	TRANSISTOR	R 2SB1013	
PT801 <u>A</u> PT801 <u>A</u>	.1-448-948-11 .1-448-949-11 .1-449-005-11	(US,Canadian)TRANSFORMER, POWER (AEP,UK)TRANSFORMER, POWER (E)TRANSFORMER, POWER	Q722 Q801 Q1001	8-729-900-61 8-729-180-92 8-729-110-22	TRANSISTOR TRANSISTOR TRANSISTOR	R 2SD809-K	
Q101 Q102 Q103	8-729-107-84 8-729-102-04 8-729-107-84	TRANSISTOR 2SC3623A-L TRANSISTOR 2SD1020-F TRANSISTOR 2SC3623A-L	Q1002 R101	8-729-110-22 1-249-466-11	TRANSISTOR		7 /454
Q104	8-729-107-84	TRANSISTOR 2SC3623A-L	R102 R103	1-249-652-11 1-249-602-11	CARBON CARBON CARBON	56K 5 % 130 5 % 120K 5 %	1/4W 1/2W 1/4W
Q105 Q106	8-729-107-84 8-729-107-84	TRANSISTOR 2SC3623A-L TRANSISTOR 2SC3623A-L	R104 R105	1-247-255-00 1-249-537-11	CARBON CARBON	4.3K 5% 240 5%	1/2W 1/4W
Q201 Q202 Q203	8-729-107-84 8-729-102-04 8-729-107-84	TRANSISTOR 2SC3623A-L TRANSISTOR 2SD1020-F TRANSISTOR 2SC3623A-L	R106 R107	1-249-539-11	CARBON CARBON	300 5% 10K 5%	1/4W 1/4W
Q204 Q205	8-729-107-84 8-729-107-84	TRANSISTOR 2SC3623A-L TRANSISTOR 2SC3623A-L	R108 R109	1-247-717-11 1-249-928-11	CARBON CARBON	2.2K 5% 1.6K 5%	1/4W 1/4W
Q206 Q501	8-729-107-84 8-729-900-63	TRANSISTOR 2SC3623A-L TRANSISTOR DTA124ES	R110 R111 R112	1-247-749-11 1-247-764-11 1-247-146-00	CARBON CARBON CARBON	560 5% 10K 5% 4.3K 5%	1/2W 1/2W 1/4W
Q502 Q503	8-729-900-89 8-729-900-36	TRANSISTOR DTC144ES TRANSISTOR DTC124ES		Note: The compone fied by mark ted line with are critical for Replace only number specif	nark 1 mark 1 safety, with part	Note: Les composants une marque A pour la sécurité. Ne les remplace pièce portant le fié.	r que par une

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R113	1-247-142-00	CARBON	3K	5%	1/4W	R170	1-249-421-11	CARBON	2.2K	5%	1/4W
R114	1-246-545-00	CARBON	1M	5%	1/4W	R171	1-249-397-11	CARBON	22	5%	1/4W
R115	1-249-917-11	CARBON	560	1%	1/4W	R172	1-247-883-00	CARBON	150K	5%	1/4W
R116	1-247-193-00	CARBON	22K	1%	1/4W	R173	1-249-429-11	CARBON	10K	5%	1/4W
R117	1-247-152-00	CARBON	7.5K	5%	1/4W	R174	1-247-725-11	CARBON	10K	5%	1/4W
R118	1-247-711-11	CARBON	680	5%	1/4W	R175	1-249-441-11	CARBON	100K	5%	1/4W
R119	1-247-154-00	CARBON	9.1K	5%	1/4W	R201	1-249-466-11	CARBON	56K	5%	1/4W
R120	1-249-465-11	CARBON	47K	5%	1/4W	R202	1-249-652-11	CARBON	130	5%	1/2W
R121	1-249-490-11	CARBON	27K	5%	1/2W	R203	1-249-602-11	CARBON	120K	5%	1/4W
R122	1-249-824-11	CARBON	8.2K	5%	1/2W	R204	1-247-255-00	CARBON	4.3K	5%	1/2W
R123	1-249-469-11	CARBON	100K	5%	1/4W	R205	1-249-537-11	CARBON	240	5%	1/4W
R124	1-247-723-11	CARBON	6.8K	5%	1/4W	R206	1-249-539-11	CARBON	300	5%	1/4W
R125	1-247-720-11	CARBON	3.9K	5%	1/4W	R207	1-249-429-11	CARBON	10K	5%	1/4W
R126	1-247-719-11	CARBON	3.3K	5%	1/4W	R208	1-247-717-11	CARBON	2.2K	5%	1/4W
R127	1-247-152-00	CARBON	7.5K	5%	1/4W	R209	1-249-928-11	CARBON	1.6K	5%	1/4W
R128	1-249-469-11	CARBON	100K	5%	1/4W	R210	1-247-749-11	CARBON	560	5%	1/2W
R129	1-247-747-11	CARBON	470	5%	1/2W	R211	1-247-764-11	CARBON	10K	5%	1/2W
R130	1-247-764-11	CARBON	10K	5%	1/2W	R212	1-247-146-00	CARBON	4.3K	5%	1/4W
R131	1-247-146-00	CARBON	4.3K	5%	1/4W	R213	1-247-142-00	CARBON	3K	5%	1/4W
R132	1-247-142-00	CARBON	3K	5%	1/4W	R214	1-246-545-00	CARBON	1M	5%	1/4W
R133	1-246-545-00	CARBON	1M	5%	1/4W	R215	1-249-917-11	CARBON	560	1%	1/4W
R134	1-249-917-11	CARBON	560	1%	1/4W	R216	1-247-193-00	CARBON	22K	1%	1/4W
R135	1-247-193-00	CARBON	22K	1%	1/4W	R217	1-247-152-00	CARBON	7.5K	5%	1/4W
R136	1-247-152-00	CARBON	7.5K	5%	1/4W	R218	1-247-711-11	CARBON	680	5%	1/4W
R137	1-247-711-11	CARBON	680	5%	1/4W	R219	1-247-154-00	CARBON	9.1K	5%	1/4W
R138	1-247-154-00	CARBON	9.1K	5%	1/4W	R220	1-249-465-11	CARBON	47K	5%	1/4W
R139	1-249-465-11	CARBON	47K	5%	1/4W	R221	1-249-490-11	CARBON	27K	5%	1/2W
R140	1-247-721-11	CARBON	4.7K	5%	1/4W	R222	1-249-824-11	CARBON	8.2K	5%	1/2W
R141	1-249-461-11	CARBON	18K	5%	1/4W	R223	1-249-469-11	CARBON	100K	5%	1/4W
R142	1-247-719-11	CARBON	3.3K	5%	1/4W	R224	1-247-723-11	CARBON	6.8K	5%	1/4W
R143	1-247-723-11	CARBON	6.8K	5%	1/4W	R225	1-247-720-11	CARBON	3.9K	5%	1/4W
R144	1-249-425-11	CARBON	4.7K	5%	1/4W	R226	1-247-719-11	CARBON	3.3K	5%	1/4W
R145	1-249-590-11	CARBON	39K	5%	1/4W	R227	1-247-152-00	CARBON	7.5K	5%	1/4W
R146	1-249-429-11	CARBON	10K	5%	1/4W	R228	1-249-469-11	CARBON	100K	5%	1/4W
R147	1-249-469-11	CARBON	100K	5%	1/4W	R229	1-247-747-11	CARBON	470	5%	1/2W
R148	1-249-459-11	CARBON	12K	5%	1/4W	R230	1-247-764-11	CARBON	10K	5%	1/2W
R149	1-247-717-11	CARBON	2.2K	5%	1/4W	R231	1-247-146-00	CARBON	4.3K	5%	1/4W
R150	1-249-466-11	CARBON	56K	5%	1/4W	R232	1-247-142-00	CARBON	3K	5%	1/4W
R151	1-249-590-11	CARBON	39K	5%	1/4W	R233	1-246-545-00	CARBON	1M	5%	1/4W
R152	1-247-703-11	CARBON	180	5%	1/4W	R234	1-249-917-11	CARBON	560	1%	1/4W
R153	1-249-459-11	CARBON	12K	5%	1/4W	R235	1-247-193-00	CARBON	22K	1%	1/4W
R154	1-247-700-11	CARBON	100	5%	1/4W	R236	1-247-152-00	CARBON	7.5K	5%	1/4W
R155	1-247-142-00	CARBON	3K	5%	1/4W	R237	1-247-711-11	CARBON	680	5%	1/4W
R156	1-247-721-11	CARBON	4.7K	5%	1/4W	R238	1-247-154-00	CARBON	9.1K	5%	1/4W
R157	1-249-429-11	CARBON	10K	5%	1/4W	R239	1-249-465-11	CARBON	47K	5%	1/4W
R158	1-249-429-11	CARBON	10K	5%	1/4W	R240	1-247-721-11	CARBON	4.7K	5%	1/4W
R159	1-247-700-11	CARBON	100	5%	1/4W	R241	1-249-461-11	CARBON	18K	5%	1/4W
R160	1-247-718-11	CARBON	2.7K	5%	1/4W	R242	1-247-719-11	CARBON	3.3K	5%	1/4W
R161	1-247-720-11	CARBON	3.9K	5%	1/4W	R243	1-247-723-11	CARBON	6.8K	5%	1/4W
R162	1-249-429-11	CARBON	10K	5%	1/4W	R244	1-249-425-11	CARBON	4.7K	5%	1/4W
R163	1-247-718-11	CARBON	2.7K	5%	1/4W	R245	1-249-590-11	CARBON	39K	5%	1/4W
R164	1-247-714-11	CARBON	1.2K	5%	1/4W	R246	1-249-429-11	CARBON	10K	5%	1/4W
R165	1-247-721-11	CARBON	4.7K	5%	1/4W	R247	1-249-469-11	CARBON	100K	5%	1/4W
R166	1-249-461-11	CARBON	18K	5%	1/4W	R248	1-249-459-11	CARBON	12K	5%	1/4W
R167	1-249-469-11	CARBON	100K	5%	1/4W	R249	1-247-717-11	CARBON	2.2K	5%	1/4W
R168	1-247-704-11	CARBON	220	5%	1/4W	R250	1-249-466-11	CARBON	56K	5%	1/4W
R169	1-247-749-11	CARBON	560	5%	1/2W	R251	1-249-590-11	CARBON	39K	5%	1/4W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R252	1-247-703-11	CARBON	180	5%	1/4W	R534	1-249-441-11	CARBON	100K	5%	1/4W
R253	1-249-459-11	CARBON	12K	5%	1/4W	R535	1-249-441-11	CARBON	100K	5%	1/4W
R254	1-247-700-11	CARBON	100	5%	1/4W	R536	1-249-441-11	CARBON	100K	5%	1/4W
R255	1-247-142-00	CARBON	3K	5%	1/4W	R537	1-249-441-11	CARBON	100K	5%	1/4W
R256	1-247-721-11	CARBON	4.7K	5%	1/4W	R538	1-249-441-11	CARBON	100K	5%	1/4W
R257	1-249-429-11	CARBON	10K	5%	1/4W	R539	1-249-441-11	CARBON	100K	5%	1/4W
R258	1-249-429-11	CARBON	10K	5%	1/4W	R540	1-249-441-11	CARBON	100K	5%	1/4W
R259	1-247-700-11	CARBON	100	5%	1/4W	R541	1-249-441-11	CARBON	100K	5%	1/4W
R260	1-247-718-11	CARBON	2.7K	5%	1/4W	R542	1-249-410-11	CARBON	270	5%	1/4W
R261	1-247-720-11	CARBON	3.9K	5%	1/4W	R543	1-249-410-11	CARBON	270	5%	1/4W
R262	1-249-429-11	CARBON	10K	5%	1/4W	R544	1-247-887-00	CARBON	220K	5%	1/4W
R263	1-247-718-11	CARBON	2.7K	5%	1/4W	R545	1-249-432-11	CARBON	18K	5%	1/4W
R264	1-247-714-11	CARBON	1.2K	5%	1/4W	R546	1-249-429-11	CARBON	10K	5%	1/4W
R265	1-247-721-11	CARBON	4.7K	5%	1/4W	R547	1-249-429-11	CARBON	10K	5%	1/4W
R266	1-249-461-11	CARBON	18K	5%	1/4W	R548	1-249-405-11	CARBON	100	5%	1/4W
R267	1-249-469-11	CARBON	100K	5%	1/4W	R549	1-249-405-11	CARBON	100	5%	1/4W
R268	1-247-704-11	CARBON	220	5%	1/4W	R550	1-249-405-11	CARBON	100	5%	1/4W
R269	1-247-749-11	CARBON	560	5%	1/2W	R551	1-249-405-11	CARBON	100	5%	1/4W
R270	1-249-421-11	CARBON	2.2K	5%	1/4W	R552	1-249-405-11	CARBON	100	5%	1/4W
R271	1-249-397-11	CARBON	22	5%	1/4W	R553	1-249-405-11	CARBON	100	5%	1/4W
R272	1-247-883-00	CARBON	150K	5%	1/4W	R554	1-249-405-11	CARBON	100	5%	1/4W
R273	1-249-429-11	CARBON	10K	5%	1/4W	R555	1-249-405-11	CARBON	100	5%	1/4W
R274	1-247-725-11	CARBON	10K	5%	1/4W	R556	1-249-405-11	CARBON	100	5%	1/4W
R275	1-249-441-11	CARBON	100K	5%	1/4W	R557	1-249-405-11	CARBON	100	5%	1/4W
R501	1-249-433-11	CARBON	22K	5%	1/4W	R701	1-247-721-11	CARBON	4.7K	5%	1/4W
R502	1-215-472-00	METAL	130K	1%	1/6W	R702	1-249-437-11	CARBON	47K	5%	1/4W
R503	1-249-429-11	CARBON	10K	5%	1/4W	R703	1-249-421-11	CARBON	2.2K	5%	1/4W
R504	1-215-472-00	METAL	130K	1%	1/6W	R704	1-247-717-11	CARBON	2.2K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W	R705	1-249-437-11	CARBON	47K	5%	1/4W
R506	1-249-438-11	CARBON	56K	5%	1/4W	R706	1-249-421-11	CARBON	2.2K	5%	1/4W
R507	1-249-433-11	CARBON	22K	5%	1/4W	R707	1-247-717-11	CARBON	2.2K	5%	1/4W
R508	1-249-421-11	CARBON	2.2K	5%	1/4W	R708	1-247-717-11	CARBON	2.2K	5%	1/4W
R509	1-249-429-11	CARBON	10K	5%	1/4W	R709	1-249-437-11	CARBON	47K	5%	1/4W
R5 10	1-249-438-11	CARBON	56K	5%	1/4W	R710	1-249-421-11	CARBON	2.2K	5%	1/4W
R5 1 1	1-249-438-11	CARBON	56K	5%	1/4W	R711	1-247-708-11	CARBON	470	5%	1/4W
R5 12	1-249-438-11	CARBON	56K	5%	1/4W	R712	1-247-713-11	CARBON	1K	5%	1/4W
R513	1-249-433-11	CARBON	22K	5%	1/4W	R713	1-247-717-11	CARBON	2.2K	5%	1/4W
R514	1-249-438-11	CARBON	56K	5%	1/4W	R714	1-249-437-11	CARBON	47K	5%	1/4W
R515	1-249-429-11	CARBON	10K	5%	1/4W	R715	1-249-421-11	CARBON	2.2K	5%	1/4W
R516	1-249-433-11	CARBON	22K	5%	1/4W	R716	1-247-721-11	CARBON	4.7K	5%	1/4W
R517	1-249-437-11	CARBON	47K	5%	1/4W	R717	1-247-891-00	CARBON	330K	5%	1/4W
R518	1-249-438-11	CARBON	56K	5%	1/4W	R718	1-249-441-11	CARBON	100K	5%	1/4W
R5 19	1-247-862-11	CARBON	20K	5%	1/4W	R719	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-247-848-11	CARBON	5.1K	5%	1/4W	R720	1-249-417-11	CARBON	1K	5%	1/4W
R52 1	1-249-425-11	CARBON	4.7K	5%	1/4W	R721	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-247-846-11	CARBON	4.3K	5%	1/4W	R722	1-247-717-11	CARBON	2.2K	5%	1/4W
R523	1-249-425-11	CARBON	4.7K	5%	1/4W	R723	1-249-437-11	CARBON	47K	5%	1/4W
R524	1-249-417-11	CARBON	1K	5%	1/4W	R724	1-247-729-11	CARBON	15	5%	1/2W
R525	1-249-437-11	CARBON	47K	5%	1/4W	R725	1-249-429-11	CARBON	10K	5%	1/4W
R526	1-249-433-11	CARBON	22K	5%	1/4W	R726	1-247-717-11	CARBON	2.2K	5%	1/4W
R527	1-247-700-11	CARBON	100	5%	1/4W	R727	1-249-437-11	CARBON	47K	5%	1/4W
R528	1-247-700-11	CARBON	100	5%	1/4W	R728	1-249-429-11	CARBON	10K	5%	1/4W
R529	1-249-429-11	CARBON	10K	5%	1/4W	R729	1-249-417-11	CARBON	1K	5%	1/4W
R530	1-249-437-11	CARBON	47K	5%	1/4W	R730	1-249-417-11	CARBON	1K	5%	1/4W
R531	1-247-700-11	CARBON	100	5%	1/4W	R731	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-247-700-11	CARBON	100	5%	1/4W	R732	1-249-417-11	CARBON	1K	5%	1/4W
R533	1-249-433-11	CARBON	22K	5%	1/4W	R733	1-249-429-11	CARBON	10K	5%	1/4W

Ref.No.	Part No.	Description			1	Ref.No.	Part No.	Description		
R734	1-249-417-11	CARBON	1K	5%	1/4W	R779	1-249-433-11	CARBON	22K 5%	1/4W
R735	1-249-429-11	CARBON	10K	5%	1/4W	R780	1-249-431-11	CARBON	15K 5%	1/4W
R736	1-247-711-11	CARBON	680	5%	1/4W	R781	1-249-430-11	CARBON	12K 5%	1/4W
R737	1-247-715-11	CARBON	1.5K	5%	1/4W	R782	1-249-426-11	CARBON	5.6K 5%	1/4W
R738 <i>(</i> 1	3-1-212-849-00	FUSIBLE	4.7	5%	1/4W F	R783	1-249-429-11	CARBON	10K 5%	1/4W
R739	1-249-437-11	CARBON	47K	5%	1/4W	R784	1-249-433-11	CARBON	22K 5%	1/4W
R740	1-249-437-11	CARBON	47K	5%	1/4W	R785	1-249-431-11	CARBON	15K 5%	1/4W
R741	1-247-883-00	CARBON	150K	5%	1/4W	R786	1-249-433-11	CARBON	22K 5%	1/4W
R742	1-247-883-00	CARBON	150K	5%	1/4W	R787	1-249-458-11	CARBON	8.2 5%	1/4W
R743	1-249-417-11	CARBON	1K	5%	1/4W	R788	1-247-747-11	CARBON	470 5%	1/2W
R744	1-249-433-11	CARBON	22K	5%	1/4W	R789	1-249-429-11	CARBON	10K 5%	1/4W
R745	1-249-433-11	CARBON	22K	5%	1/4W	R790	1-247-694-11	CARBON	33 5%	1/4W
R746	1-249-433-11	CARBON	22K	5%	1/4W	R795	1-247-901-11	CARBON	820K 5%	1/4W
R747	1-249-433-11	CARBON	22K	5%	1/4W	R799	1-247-747-11	CARBON	470 5%	1/2W
R748	1-249-417-11	CARBON	1K	5%	1/4W	R801	1-247-713-11	CARBON	1K 5%	1/4W
R749	1-249-417-11	CARBON	1K	5%	1/4W	R802	1-247-721-11	CARBON	4.7K 5%	1/4W
R750	1-249-430-11	CARBON	12K	5%	1/4W	R803	1-249-437-11	CARBON	47K 5%	1/4W
R751	1-249-430-11	CARBON	12K	5%	1/4W	R804 <u>∧</u> .	.1-212-861-11	FUSIBLE	15 5%	1/4W F
R752	1-249-433-11	CARBON	22K	5%	1/4W	R901	1-216-198-00	METAL GLAZE	1K 5%	1/8W
R753	1-249-433-11	CARBON	22K	5%	1/4W	R902	1-216-198-00	METAL GLAZE	1K 5%	1/8W
R754	1-249-433-11	CARBON	22K	5%	1/4W	R903	1-216-238-00	METAL GLAZE	47K 5%	1/8W
R755	1-249-433-11	CARBON	22K	5%	1/4W	R904	1-216-198-00	METAL GLAZE	1K 5%	1/8W
R756	1-249-433-11	CARBON	22K	5%	1/4W	R905	1-216-224-00	METAL GLAZE	12K 5%	1/8W
R757	1-249-433-11	CARBON	22K	5%	1/4W	R906	1-216-217-00	METAL GLAZE	6.2K 5%	1/8W
R758	1-249-433-11	CARBON	22K	5%	1/4W	R907	1-216-242-00	METAL GLAZE	68K 5%	1/8W
R759	1-249-441-11	CARBON	100K	5%	1/4W	R908	1-216-246-00	METAL GLAZE	100K 5%	1/8W
R760	1-249-429-11	CARBON	10K	5%	1/4W	R909	1-216-246-00	METAL GLAZE	100K 5%	1/8W
R761	1-249-413-11	CARBON	470	5%	1/4W	R910	1-216-238-00	METAL GLAZE	47K 5%	1/8W
R762	1-249-413-11	CARBON	470	5%	1/4W	R911	1-216-182-00	METAL GLAZE	220 5%	1/8W
R763	1-249-413-11	CARBON	470	5%	1/4W	R912	1-216-182-00	METAL GLAZE	220 5%	1/8W
R764	1-249-413-11	CARBON	470	5%	1/4W	R913	1-216-150-00	METAL GLAZE	10 5%	1/8W
R765	1-249-409-11	CARBON	220	5%	1/4W	R914	1-216-150-00	METAL GLAZE	10 5%	1/8W
R766	1-249-413-11	CARBON	470	5%	1/4W	R915	1-216-150-00	METAL GLAZE	10 5%	1/8W
R767 R768 R769	1-249-410-11 1-249-417-11 1-249-417-11	CARBON CARBON CARBON	270 1K 1K	5% 5% 5%	1/4W 1/4W 1/4W	RV 101 RV 102 RV 103	1-224-251-XX 1-224-251-XX 1-237-459-21		AL GLAZE 4.	7K(PB LEVEL L) 7K(REC LEVEL L) VEL METER L)
R770 R771 R772	1-249-432-11 1-249-430-11 1-249-433-11	CARBON CARBON CARBON	18K 12K 22K	5% 5% 5%	1/4W 1/4W 1/4W	RV201 RV202 RV203	1-224-251-XX 1-224-251-XX 1-237-459-21		AL GLAZE 4.	7K(PB LEVEL R) 7K(REC LEVEL R) VEL METER R)
R773 R774 R775	1-249-422-11 1-247-903-00 1-249-433-11	CARBON CARBON CARBON	2.7K 1M 22K	5% 5% 5%	1/4W 1/4W 1/4W	RV501 RV502	1-230-344-11 1-237-389-11	RES, VAR, CARI RES, VAR, CARI (CAI		
R776 R777 R778	1-249-429-11 1-249-426-11 1-249-430-11	CARBON CARBON CARBON	10K 5.6K 12K	5% 5% 5%	1/4W 1/4W 1/4W	RV503 RV504 RV505	1-237-388-11 1-226-560-00 1-237-456-11		BON 5K (CAL	(PHONE LEVEL) IBRATION BIAS) MAL BIAS I)

Note:
The components identified by mark A or dotted line with mark recritical for safety.
Replace only with part number specified.

Note: Les composants identifiés par une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spéci-fié.

Ref.No.	Part No.	Description
RV506 RV701	1-237-455-11 1-228-990-00	RES, ADJ, CARBON 500(NORMAL BIAS IV) RES, ADJ, CARBON 1K (FWD TORQUE)
RY501	1-515-614-11	RELAY (LINE MUTE)
\$501 \$502	1-554-338-00 1-571-092-11	
\$701 \$702 \$703	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (■) SWITCH, KEY BOARD (◄) SWITCH, KEY BOARD (▶)
\$704 \$705 \$706	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (REC ●) SWITCH, KEY BOARD (▶) SWITCH, KEY BOARD (PAUSE ■)
		SWITCH, KEY BOARD (REC MUTE ♠) SWITCH, KEY BOARD (COUNTER RESET) SWITCH, KEY BOARD (COUNTER MEMORY)
S801 <u>A</u>	1-516-781-XX .1-554-920-11 .1-570-307-11	SWITCH, ROTARY (TIMER) SWITCH, PUSH (AC POWER)(1 KEY) (E)SWITCH, VOLTAGE CHANGE
\$1001 \$1002 \$1003	1-554-205-00 1-554-205-00 1-554-205-00	SWITCH, PUSH (ERASE PROOF) SWITCH, PUSH (HALF DET) SWITCH, PUSH (LOCK DET)
\$1004 \$1005	1-554-205-00 1-554-205-00	SWITCH, PUSH (METAL) SWITCH, PUSH (CrO2)
TH501	1-800-200-00	THERMISTOR S-3K
THP5014	1-202-856-00	SOLID 22 1/4W F
X701 X702 X703	1-567-160-00 1-527-532-00 1-567-731-11	OSCILLATOR, CERAMIC (4.19MHz) OSCILLATOR, CERAMIC (400kHz) VIBRATOR, CRYSTAL (10.5MHz)

ACCESSORY & PACKING MATERIAL

1-465-104-11 1-551-734-11 *3-318-684-01	(UK)REMOTE COMMANDER (RM-J600) CORD, CONNECTION (RK-74A) CUSHION
*3-350-429-01 *3-350-429-11 *3-350-437-01	(US,Canadian,AEP)INDIVIDUAL CARTON (E)INDIVIDUAL CARTON (UK)INDIVIDUAL CARTON
3-701-630-00 3-703-450-01	BAG, POLYETHYLENE (US)INSTRUCTION
3-786-746-21 3-786-746-41 3-786-746-51	(US,Canadian,UK,E)MANUAL, INSTRUCTION (AEP)MANUAL, INSTRUCTION (Canadian,AEP)MANUAL, INSTRUCTION
3-793-481-13 4-384-285-01 4-820-330-31	INSTRUCTION (UK)COVER, BATTERY (EXCEPT UK)SCREW, BW, PLUS MINUS

Note:
The components identified by mark A or dotted line with mark are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque À sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.